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Environment Agency
Permitting Support, NPS Sheffield
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99 Parkway Avenue
Parkway Business Park
Sheffield
S9 4WF

GWP Report No: 251123

Our ref: EA AW261125
Your ref: EPR/BP3095EU/V006

05 December 2025

FAO Mr Andrew Westoby

Dear Mr Westoby

EPR/BP3095EU/V006 - Multi-Agg Limited - Shellingford Quarry - Response to Environment Agency email dated 24th November 2025

This Report Letter provides the additional information requested in Environment Agency (EA) email dated 24th November 2025 relating to the application to vary EPR Environmental Permit EPR/BP3095EU. For ease of reference the EA email is presented in Appendix 1.

The information is provided in the order that it has been requested in the EA email.

1. OUTSTANDING APPLICATION PAYMENT

The EA state in their email that the application payment sent with the Permit variation application is incorrect and that the correct application charge is £12,458. An outstanding payment of £1,359 is to be paid.

For reference, an Environmental Permit Application BACS payment by Earthline Limited (on behalf of Multi-Agg Limited) for £11,099 was made on 21st October 2025 (remittance number PSCAPPWASTEMULTI912).

The outstanding payment of £1,359 has been made by Earthline Limited (on behalf of Multi-Agg Limited). The payment was made on 4th December 2025 (remittance number PSCAPPWASTEMULTI913).

2. ENVIRONMENTAL MANAGEMENT SYSTEM – CLIMATE CHANGE ADAPTATION RISK ASSESSMENT

The climate change adaptation risk assessment, which makes up Appendix 10 of the Environmental Management System (EMS) document, is provided in Appendix 2 of this Report Letter.

3. ELECTRONIC COPIES OF RAM MODEL FILES

The GWP Consultants LLP (GWP) Hydrogeological Risk Assessment Report (GWP Report No. 250716) accompanied the EPR Permit variation application as Appendix Hiv.

Appendix 7 of the GWP Hydrogeological Risk Assessment Report included the Hafren Water Hydrogeological Risk Assessment Report (3810/HRA Final F2 October 2025) which incorporated the input parameters and a summary of the numerical modelling undertaken through RAM3 software. Numerical models were produced for the above groundwater table and below groundwater table scenarios.

Electronic copies of the RAM3 model files used in the Hydrogeological Risk Assessment were not included at the time of the submission of the Permit variation application. The above groundwater table and below groundwater table RAM3 model files have been provided in Appendix 3 of this Report Letter.

4. DESCRIPTION OF THE BOUNDARY BETWEEN THE LANDFILL AREA AND THE DEPOSIT FOR RECOVERY AREA

The boundary between the existing permitted inert landfill extent and the proposed deposit for recovery activity in the western extension area is proposed to be demarcated using an engineered artificial geological barrier (AGB) as shown by Drawing No. SHELLQMA2512-1 included within Appendix 4.

Currently, no landfilling has been undertaken along the western and southwestern extents of the currently permitted inert landfill area, which is adjacent to the proposed deposit for recovery area. The extents of the existing part of the site that has been landfilled, the area to be landfilled which is upgradient of the deposit for recovery activity and the proposed deposit for recovery area within the western extension area are shown on Drawing 3810/HRA/02 within Appendix 7 of the Hydrogeological Risk Assessment Report (Appendix Hiv of the EPR/BP3095EU/V006 Permit variation application).

The AGB between the inert landfill and the deposit for recovery area will comprise a compacted layer of indigenous quarry waste (processing fines, excess clays and overburden material) and/or suitable selected imported inert waste material and will have a minimum thickness of 1m and a permeability no greater than 1 x 10^{-7}m/s. The AGB will be constructed in accordance with the approved original Construction Quality Assurance (CQA) Plan (PGW&A Report reference SQL/CQA Plan/1) and the Addendum CQA Plan (GWP Report No. 190508) approved by the EA.

5. CROSS-SECTIONS ACROSS THE ENTIRE PERMIT AREA

Schematic cross sections of the engineered boundary, including the AGB, between the existing permitted inert landfill extent and deposit for recovery activity in the western extension area are provided on Drawing No. SHELLQMA2512-2 within Appendix 4. The cross-section extents are shown on Drawing No. SHELLQMA2512-1 within Appendix 4. The AGB between the inert landfill and the deposit for recovery activity area will be suitably constructed on a phased basis once inert fill material is initially placed within either the western edge of the inert landfill extent or the deposit for recovery activity area.

Drawing No. SHELLQMA2512-2 also shows the geological sequence and dewatered and rebounded water levels under the operational and restored site conditions. As a conservative approach the HRA, including the numerical modelling undertaken in Appendix 7 of the HRA Report, assumed there was no AGB between the existing permitted inert landfill extent and the proposed deposit for recovery activity in the western extension area.

6. BOREHOLE LOGS OF MONITORING BOREHOLES

The borehole logs for the monitoring boreholes shown on Drawing No. SHELLQMA2508-14 (drawing included within the GWP Hydrogeological Risk Assessment Report) are provided in Appendix 5 of this Report Letter. The borehole logs have been separated into the year in which they were installed (series).

7. FEES ASSOCIATED WITH ENHANCED PRE-APPLICATION ADVICE EPR/BP3095EU/P001

The fee of £600 (£720 inc. VAT) associated with enhanced pre-application advice EPR/BP3095EU/P001 (EA Invoice no. 414251) was paid by Earthline Limited (on behalf of Multi-Agg Limited) on 30th April 2025. The payment evidence is included in Appendix 6.

Yours sincerely

Edward Betteridge
Environmental Scientist

Encs

Appendix 1 – Environment Agency email dated 24th November 2025
Appendix 2 – Shellingford Quarry Climate Change Adaptation Risk Assessment
Appendix 3 – Electronic RAM3 Model files
Appendix 4 – Drawing Nos. SHELLQMA2512-1 and SHELLQMA2512-2

Appendix 5 – Borehole logs
Appendix 6 – Enhanced pre-application advice EPR/BP3095EU/P001 (EA Invoice no. 414251) payment evidence

APPENDIX 1

Environment Agency email dated 24th November 2025

Edward Betteridge

From: Andrew Westoby <andrew.westoby@environment-agency.gov.uk>
Sent: 24 November 2025 11:35
To: Edward Betteridge
Subject: EPR/BP3095EU/V006 Shellingford Quarry Landfill Deposit for Recovery Application

Dear Edward Betteridge,

We need more information about your application

Application reference: EPR/BP3095EU/V006
Operator: MULTI - AGG LIMITED
Facility: Shellingford Quarry Landfill

Thank you for your application received on 22/10/2025.

We are contacting you following our initial review of your application. We call this initial review 'validation'. Please note that your application is still on our work queue and has not yet been allocated to a Permitting Officer for duly making and determination.

Unfortunately, the application payment you sent is incorrect. The correct application charge is £12,458. This leaves a balance of £1,359 to pay.

We need to ask you for some missing information before an officer can do any more work on your application. Please provide us with more information regarding the following;

- Provide climate change adaptation risk assessment
  Reason: Whilst listed as appendix 10 of the EMS this document does not appear to have been provided.

- Provide electronic copies of the RAM models
  Reason: These appear to be absent from the application.

- Provide a description of the boundary between the Landfill area and the DfR area
  Reason: The application does not describe the relationship between the waste disposal (landfill) and waste recovery areas. Whilst it is recognised that these areas are engineered in a similar manner and accept the same waste mass, the two areas are regulated under differing waste regimes and it is unclear if there is any engineering proposed on this boundary.

- Provide cross-sections across the entire permit area.
  Reason: The updated HRA which includes the existing landfill area, does not include any cross-sections showing the relationship between the proposed DfR and the existing landfill, noting that the landfill is a waste disposal activity governed by the Landfill Directive with defined engineering requirements and that the DfR is a recovery operation which is outside of the requirements of the LFD. The cross-sections need to provide the proposed engineering details, together with dewatered and rebound water levels, and the geological sequence.

- Provide borehole logs for the monitoring boreholes.
  Reason: The application clearly states that a number of wells have been lost during the development and that these have been replaced. Borehole logs are required to demonstrate that these boreholes are suitably installed to achieve their monitoring objectives and in particular intersect gas pathways where this is an objective of the monitoring point.

- Our system shows outstanding fees of £600 for enhanced pre-application advice EPR/BP3095EU/P001. Please settle this outstanding fee or, should you believe this has been paid previously, provide evidence of payment.

Please reply directly to this email with your information.

You must send us the information and payment by 08/12/2025.

Details of how to pay are given in Part F of the application form.

If we do not receive this by this deadline we will return your application.

If we receive what is missing by the deadline, the Permitting Officer will still need to check your application when it is allocated. They'll check to see if there's enough information for the application to be 'duly made'. Duly made means that we have all the information we need to begin determination. Determination is where we assess your application and decide if we can allow what you've asked for.

We'll let you know by letter whether your application can be duly made. If it can't be duly made, we'll return your application to you.

If we do have to return your application, we'll send you a partial refund of your application payment. We'll retain 20% of the application charge to cover our costs in reviewing your application and requesting information. This maximum amount we'll retain is capped at £1,500. Further information on charging can be found at: https://www.gov.uk/government/publications/environmental-permits-and-abstraction-licences-tables-of-charges

We have also identified the following, which although it will not prevent us from duly making the application, will be required during determination. You should provide this information as early as possible to avoid delays during determination.

- The provided Waste Acceptance Procedure does fully meet with guidance Waste acceptance procedures for deposit for recovery - GOV.UK.
- The application has stated that the attenuation layer/artificial geological barrier, will be constructed from indigenous material and /or suitable selected imported waste material. We appreciate that the pre-application advice included a link to the guidance with respect to "Landfill operators: environmental permits - What to include in your hydrogeological risk assessment - Guidance - GOV.UK". Within this guidance, direction is given to Waste recovery plans and deposit for recovery permits - GOV.UK Waste recovery link which in turn details the guidance on using waste in engineered structures Engineering construction proposals for deposit for recovery - GOV.UK. This guidance includes provisions for the use of waste in engineered structures including those at a landfill. The application is not clear on how the waste within attenuation layer satisfies all of the following:
    - making sure that the waste is from a single source or waste type
    - making sure it meets the definition of inert waste
    - making sure the waste has a pollution potential less than, or equal to, the natural quality of the surrounding geology and water
    - using suitable cohesive material in the attenuation layer (you must test this waste as part of your material assessment)
    - confirming that the attenuation material will not leach non-hazardous pollutants into groundwater
    - including evidence that the material contains no hazardous substances at sites over a principal aquifer or below the water table

Note: Our email system has a file size limit of 25MB, if your returns exceed this limit you will have to arrange an online file transfer. Please ensure the file transfer link does not have a time limit on it.

If you have any questions, please let me know.

Yours sincerely,

Andrew Westoby
Senior Permitting Officer | Waste Deposit Team
National Permitting Service
Environment Agency | Trentside Offices, Scarrington Road, West Bridgford, NG2 5FA (SATNAV: NG2 5BR)

andrew.westoby@environment-agency.gov.uk
Telephone: 020 3025 3551
Incident Communication Service (24/7) | 0800 80 70 60

APPENDIX 2

Shellingford Quarry Climate Change Adaptation Risk Assessment

Climate change effect and potential impacts		Judgement				Action and mitigation	
Climate change effect	**Potential impact**	**Probability of exposure**	**Consequence**	**Magnitude of risk**	**Justification for magnitude**	**Risk management and mitigation**	**Residual risk**
1. Higher summer daily maximum temperatures	Potential for increased waste reactions or fires involving heat sensitive or combustible waste.	Very low	Medium	**Low**	Permitted waste types are inert and have a very low potential to catch fire. No combustible wastes accepted or stored in accordance with existing inert landfill Permit EPR/BP3095EU and existing waste physical treatment Permit EPR/EB3839AA.	Activities will be managed and operated in accordance with the Environmental Management System (EMS). Site personnel to follow Fire Procedure PR10 of EMS.	Very low
1. Higher summer daily maximum temperatures	Potential for fire if the temperature exceeds the heat rating of components in electrical equipment or components are subjected to intense and direct sunlight.	Low	Medium	**Low**	Plant protected from prolonged periods of direct sunlight. Regular shutdown periods / breaks to avoid overheating. Plant is routinely inspected and maintained in accordance with operating manual.	Activities will be managed and operated in accordance with the Environmental Management System (EMS). Inspection & Maintenance Procedure PR2 of EMS. Site personnel to follow Fire Procedure PR10 of EMS. Reviewing the heat rating of components that have high work loads or are likely to be exposed to direct sunlight and heat. Shading electrical equipment if it is subject to direct sunlight for prolonged periods of time.	Low
1. Higher summer daily maximum temperatures	Potential increase in high temperature expansion and stress of plant, pipework and fittings. UV degradation of plastic pipes and hoses causing them to fail.	Low	Medium	**Low**	Very few exposed pipes and hoses on plant associated with waste treatment Environmental Permit EPR/EB3839AA. Regular shutdown periods / breaks to avoid overheating. Plant is routinely inspected and maintained in accordance with operating manual.	Activities will be managed and operated in accordance with the Environmental Management System (EMS). Inspection & Maintenance Procedure PR2 of EMS. Regular inspection and preventative maintenance of site, plant and equipment. Replacement of exposed pipes and hoses when necessary.	Low

Climate change effect and potential impacts		Judgement				Action and mitigation	
Climate change effect	**Potential impact**	**Probability of exposure**	**Consequence**	**Magnitude of risk**	**Justification for magnitude**	**Risk management and mitigation**	**Residual risk**
1. Higher summer daily maximum temperatures	Potential increased dust emissions from processing areas, stockpiled material and site roads. Reduced availability of water for dust suppression.	Medium	Low	**Low**	Permitted waste types are inert. The activities may produce dust from movement of vehicles and tipping operations especially in dry and also windy weather. The potential for impact from dust will be minimised and managed in accordance with the mitigation measures set out in the Dust Emissions Management Plan (Appendix 9 of EMS).	Activities will be managed and operated in accordance with the Environmental Management System (EMS) that includes measures to prevent and reduce risk of dust being produced, and this resultant dust, from leaving the site boundaries. Dust and particulate control measures outlined within Site Operation Procedure PR1 of EMS – stopping waste receipt until strong winds have ceased and/or the use of a mobile water bowser to spray the haul road to prevent dust becoming airborne. Complaints Procedure PR8 of EMS in place in case of any complaints from local residents in relation to dust generated from site activities. Dust Emissions Management Plan (Appendix 9 of EMS). Regular site cleaning and use of dust suppression systems. Capturing, collecting and storing rainwater in existing rainwater storage lagoons for use in dust suppression systems. The storage lagoons provide more water than is required for the water bowser and wheel-wash. In the event of a water shortage, dust suppression throughout the site will be a priority. If in extreme circumstances, where there is not enough water in the lagoons, mains water will be utilised and some or all site operations will be suspended so as not to cause adverse dust impacts beyond the site boundary.	Low

Climate change effect and potential impacts		Judgement				Action and mitigation	
Climate change effect	**Potential impact**	**Probability of exposure**	**Consequence**	**Magnitude of risk**	**Justification for magnitude**	**Risk management and mitigation**	**Residual risk**
1. Higher summer daily maximum temperatures	Long periods of hot and dry weather could lead to a drought and may have an impact on water supplies for: • emergency water usage • cooling systems • fire fighting • processes that require water as input, for example aggregate and soil washing plants	Low	Medium	**Low**	Emergency water usage and cooling systems – Environmental Policy PO1 of EMS encourages minimisation of water use where viable, to enable increased water availability during emergencies. Captured rainwater is stored in lagoons for use in dust suppression. The lagoons provide excess capacity for the water requirements. In the event of a water shortage, dust suppression throughout the site will be a priority. If in extreme circumstances, where there is not enough water in the lagoons, mains water will be utilised and some or all site operations will be suspended so as not to cause adverse dust impacts beyond the site boundary. Fire fighting – Permitted waste types are inert and have a very low potential to catch fire. No combustible wastes accepted or stored in accordance with existing inert landfill Permit EPR/BP3095EU and existing waste physical treatment Permit EPR/EB3839AA. Therefore, the likelihood of requiring water for firefighting is very low. Rainwater from the storage lagoons and mains water supply are available. Processes requiring water input – Not many processes on site which require water input, however the existing waste physical treatment Permit EPR/EB3839AA does allow for washing of waste as part of waste recovery as a soil, soil substitute or aggregate. In the event of a water shortage, dust suppression throughout the site will be a priority and therefore the waste treatment activity, including washing, will be suspended.	Activities will be managed and operated in accordance with the Environmental Management System (EMS). Environmental Policy PO1 of EMS. Dust Emissions Management Plan (Appendix 9 of EMS). Dust suppression throughout the site will take precedence during water shortages, meaning other operations will be suspended, including waste treatment/washing activities. Reviewing the current level of water usage to determine whether this can be reduced and how it can be reduced, for example re-circulation. Exploring potential for further water capture and storage at the site for use in on-site processes. Reviewing which systems and processes have a critical need for water and what the baseline requirements are. Discussions with water utilities about the supply of water and any likely drought restrictions during prolonged periods of dry weather. Reviewing fire suppression plans including water, and considering what alternative means of firefighting are when water is scarce.	Low

Climate change effect and potential impacts		Judgement				Action and mitigation	
Climate change effect	**Potential impact**	**Probability of exposure**	**Consequence**	**Magnitude of risk**	**Justification for magnitude**	**Risk management and mitigation**	**Residual risk**
1. Higher summer daily maximum temperatures	Potential increased risk of pests and scavengers from stockpiled waste such as food and drink containers, food contaminated wastes and 'black bag' type wastes.	Very low	Very Low	**Very Low**	Permitted waste types are inert and have a very low potential to attract pests and scavengers. No food waste/food waste containers/municipal wastes accepted or stored in accordance with existing inert landfill Permit EPR/BP3095EU and existing waste physical treatment Permit EPR/EB3839AA.	Activities will be managed and operated in accordance with the Environmental Management System (EMS). Robust Waste Acceptance Procedures (Procedure PR3 of EMS) ensures all imported waste has an accompanying Waste Transfer Note, is inspected, and taken away from site if it does not conform to the list of accepted wastes. Complaints Procedure PR8 of EMS in place in case of any complaints from local residents in relation to odour generated from site activities. Low storage time of wastes on site prior to waste treatment to produce soil, soil substitutes and aggregate under existing waste physical treatment Permit EPR/EB3839AA.	Very Low
1. Higher summer daily maximum temperatures	Potential increased risk of wildfires impacting the site.	Very Low	Medium	**Low**	Permitted waste types are inert and have a very low potential to catch fire. No combustible wastes accepted or stored in accordance with existing inert landfill Permit EPR/BP3095EU and existing waste physical treatment Permit EPR/EB3839AA. Plant, waste stockpiles, equipment and buildings are all located away from any vegetation.	Activities will be managed and operated in accordance with the Environmental Management System (EMS). Site personnel to follow Fire Procedure PR10 of EMS. Monitoring vegetation surrounding the site during spells of hot and dry weather. Identifying areas of the site, wastes and equipment that are at greatest risk from wildfires and reviewing fire prevention plan to address these. Identifying processes and areas of the site where sparks and heat may be generated and potentially ignite dry vegetation and taking steps to prevent this.	Very Low

Climate change effect and potential impacts		Judgement				Action and mitigation	
Climate change effect	**Potential impact**	**Probability of exposure**	**Consequence**	**Magnitude of risk**	**Justification for magnitude**	**Risk management and mitigation**	**Residual risk**
2. Higher winter daily temperatures	Slightly higher winter maximum temperatures could generate odour complaints and pest infestations.	Very Low	Very Low	**Very Low**	Permitted waste types are inert and have a very low potential to generate odour or attract pests and scavengers. No food waste/food waste containers/municipal wastes accepted or stored in accordance with existing inert landfill Permit EPR/BP3095EU and existing waste physical treatment Permit EPR/EB3839AA.	Activities will be managed and operated in accordance with the Environmental Management System (EMS). Robust Waste Acceptance Procedures (Procedure PR3 of EMS) ensures all imported waste has an accompanying Waste Transfer Note, is inspected, and taken away from site if it does not conform to the list of accepted wastes. Complaints Procedure PR8 of EMS in place in case of any complaints from local residents in relation to odour generated from site activities. Low storage time of wastes on site prior to waste treatment to produce soil, soil substitutes and aggregate under existing waste physical treatment Permit EPR/EB3839AA.	Very Low
3. Lower winter daily temperatures	Lower winter temperatures could result in an increased risk of pipes (or similar) freezing.	Low	Low	**Low**	Plant is routinely inspected and maintained in accordance with operating manual. Check of plant on startup during days experiencing freezing conditions to ensure functionality. If necessary, plant/exposed areas of plant are covered at the end of the working day to reduce exposure to frost.	Activities will be managed and operated in accordance with the Environmental Management System (EMS). Inspection & Maintenance Procedure PR2 of EMS. Regular inspection and preventative maintenance of site, plant and equipment.	Low
4. Increased daily extreme rainfall	Potential for increased site surface water runoff, ponding and flooding, including potential for drainage systems and interceptors to be overwhelmed.	Medium	Medium	**Medium**	Most of the site is located in an area that has a very low risk of surface water flooding (<0.1% chance of flooding each year), according to the Government's long term flood risk map. Parts of the existing Permitted site have standalone low, medium and high risk (>3.3% annual chance) areas of surface water flood risk. These areas are not shown to increase significantly when future climate change risks are applied on the long term flood risk map – 'Yearly chance of flooding between 2040 and 2060'. None of the current	Activities will be managed and operated in accordance with the Environmental Management System (EMS). Management of surface water in accordance with approved Planning Permissions and Surface Water Management Plan (GWP Consultants LLP Report No. 250314). Surface Water Management Plan to be reviewed regularly as part of wider EMS review.	Low

Climate change effect and potential impacts		Judgement				Action and mitigation	
Climate change effect	**Potential impact**	**Probability of exposure**	**Consequence**	**Magnitude of risk**	**Justification for magnitude**	**Risk management and mitigation**	**Residual risk**
					standalone areas of surface water flood risk are shown to contribute to off-site receptors. The western extension area is within an area that has a very low risk of surface water flooding. Plant associated with existing waste physical treatment Permit EPR/EB3839AA is not located in an area that will be affected by any flooding. Very few buildings on site. Site weighbridge and offices are elevated above any potential flood waters. A Surface Water Management Plan (GWP Consultants LLP Report No. 250314) outlines how surface water is managed at the site, including for the active phase of restoration infilling and post-restoration. The report accompanied the EPR/BP3095EU/V004 Permit variation application, submitted in October 2025, as Appendix Hvii. Approved Planning Permissions provide for surface water management, including controlled attenuation and discharge from the completed site which incorporates climate change allowances.	Weather forecasts checked to see if likely for high rainfall amounts to be experienced at the site. Drainage systems are inspected and maintained.	
5. Sea level rise	If a site is located near the coast there is potential increased risk of flooding.	None	None	**None**	Potential sea level rise of 0.6m when compared to current sea level will not impact on the site. The site is *c.* 60km away from the coast. Ground levels at the site are *c.* 70mAOD to 90mAOD.	Not applicable as no risk.	None
6. Lower summer rainfall amounts	Long periods of hot and dry weather could lead to a drought and may have an impact on water supplies for: • emergency water usage • cooling systems • fire fighting • processes that require water as input for example aggregate and soil washing plants	Low	Medium	**Low**	Emergency water usage and cooling systems – Environmental Policy PO1 of EMS encourages minimisation of water use where viable, to enable increased water availability during emergencies. Captured rainwater is stored in lagoons for use in dust suppression. The lagoons provide excess capacity for the water requirements. In the event of a water shortage,	Activities will be managed and operated in accordance with the Environmental Management System (EMS). Environmental Policy PO1 of EMS. Dust Emissions Management Plan (Appendix 9 of EMS). Dust suppression throughout	Low

Climate change effect and potential impacts		Judgement				Action and mitigation	
Climate change effect	**Potential impact**	**Probability of exposure**	**Consequence**	**Magnitude of risk**	**Justification for magnitude**	**Risk management and mitigation**	**Residual risk**
					dust suppression throughout the site will be a priority. If in extreme circumstances, where there is not enough water in the lagoons, mains water will be utilised and some or all site operations will be suspended so as not to cause adverse dust impacts beyond the site boundary. Fire fighting – Permitted waste types are inert and have a very low potential to catch fire. No combustible wastes accepted or stored in accordance with existing inert landfill Permit EPR/BP3095EU and existing waste physical treatment Permit EPR/EB3839AA. Therefore, the likelihood of requiring water for firefighting is very low. Rainwater from the storage lagoons and mains water supply are available. Processes requiring water input – Not many processes on site which require water input, however the existing waste physical treatment Permit EPR/EB3839AA does allow for washing of waste as part of waste recovery as a soil, soil substitute or aggregate. In the event of a water shortage, dust suppression throughout the site will be a priority and therefore the waste treatment activity, including washing, will be suspended.	the site will take precedence during water shortages, meaning other operations will be suspended, including waste treatment/washing activities. Reviewing the current level of water usage to determine whether this can be reduced and how it can be reduced, for example re-circulation. Exploring options for water harvesting and storage at the site for use in on-site processes. Reviewing which systems and processes have a critical need for water and what the baseline requirements are. Discussions with water utilities about the supply of water and any likely drought restrictions during prolonged periods of dry weather. Reviewing fire suppression plans including water, and considering what alternative means of firefighting are when water is scarce.	
7. Increased flows in watercourses	Increased potential for flooding of site from river capacity exceedance causing fluvial flooding.	Very Low	Medium	**Very Low**	The entire site, including the area covered by existing inert landfill Permit EPR/BP3095EU and the western extension area, is located in fluvial Flood Zone 1. This is according to the Government's Flood Map for Planning. The map also shows that the site is not at risk of fluvial flooding when the climate change (2070 to 2125) layer is applied. The site is not at risk of river flooding now, or in the future. Very few buildings on site. Site weighbridge and offices are elevated above any potential flood waters.	Activities will be managed and operated in accordance with the Environmental Management System (EMS). Weather forecasts checked to see if potential for high flows in the Holywell Brook.	Very Low

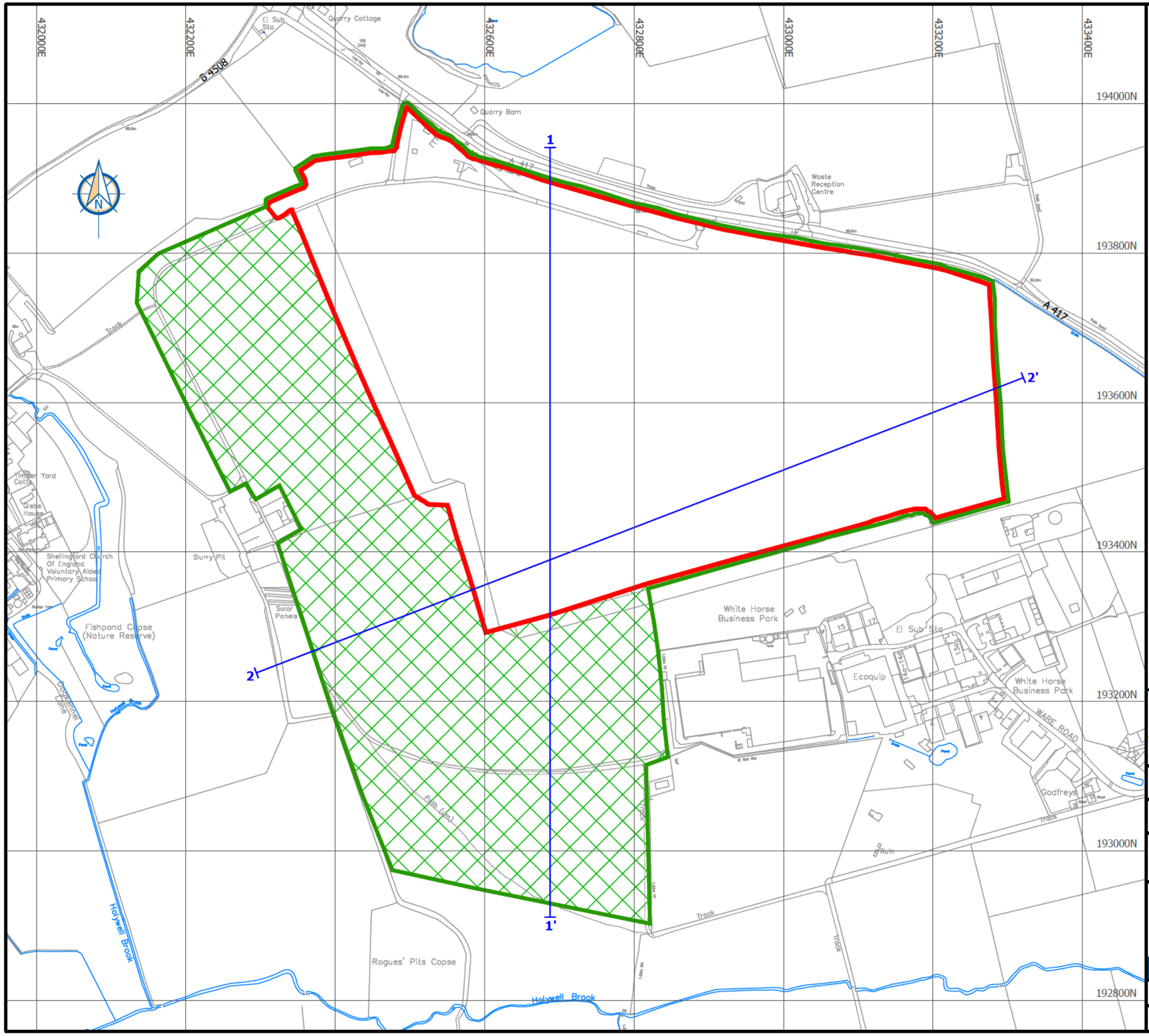
Climate change effect and potential impacts		Judgement				Action and mitigation	
Climate change effect	**Potential impact**	**Probability of exposure**	**Consequence**	**Magnitude of risk**	**Justification for magnitude**	**Risk management and mitigation**	**Residual risk**
8. Increased frequency and intensity of storms	Potential for high winds to damage buildings and infrastructure and blow waste from the site. Increased potential for lightning strikes to damage buildings and infrastructure.	Low	Medium	**Low**	Very few buildings and little infrastructure on site that could be impacted by high winds and lightning. Weighbridge is elevated but is in a sheltered location in the north of the site. Permitted waste types are inert. Potential increased dust movement in windy weather, but storm may bring rain which suppresses dust movement. Inert waste has low contamination potential, so risk is minimal even if it is blown away from site. The potential for impact from dust will be minimised and managed in accordance with the mitigation measures set out in the Dust Emissions Management Plan (Appendix 9 of EMS). If necessary, some or all site operations can be suspended so as not to cause adverse dust impacts beyond the site boundary.	Activities will be managed and operated in accordance with the Environmental Management System (EMS). Accident, Incident and Emergency Procedures (PR9) of EMS to be followed. Complaints Procedure PR8 of EMS in place in case of any complaints from local residents in relation to wind-blown dust or other site activities. Weather forecasts checked to see if potential for high winds/storm conditions and adjust site practices accordingly – operational shutdown/evacuation and mobile backup generators if necessary. Reviewing buildings and infrastructure to identify vulnerable areas to high winds/lightning and measures to protect them and mitigate any impacts from damage. Potential for wind breaks or alternative stockpile locations that will reduce the potential impact on downwind receptors.	Low

APPENDIX 3

Electronic RAM3 Model files

APPENDIX 4

Drawing Nos. SHELLQMA2512-1 and SHELLQMA2512-2



LEGEND

- Existing Environmental Permit boundary (EPR/BP3095EU)
- Environmental Permit variation application boundary
- Western extension area - deposit for recovery activity
- Watercourses/waterbodies
- 2' Line of cross section

Version	Revision and compilation notes	Date
a	Issued	05.12.2025

Client: Multi-Agg Limited

Project: Shellingford Quarry Landfill – Environmental Permit variation EPR/BP3095EU/V004

Shellingford Quarry site location context plan

GWP consultants
earth & water resources
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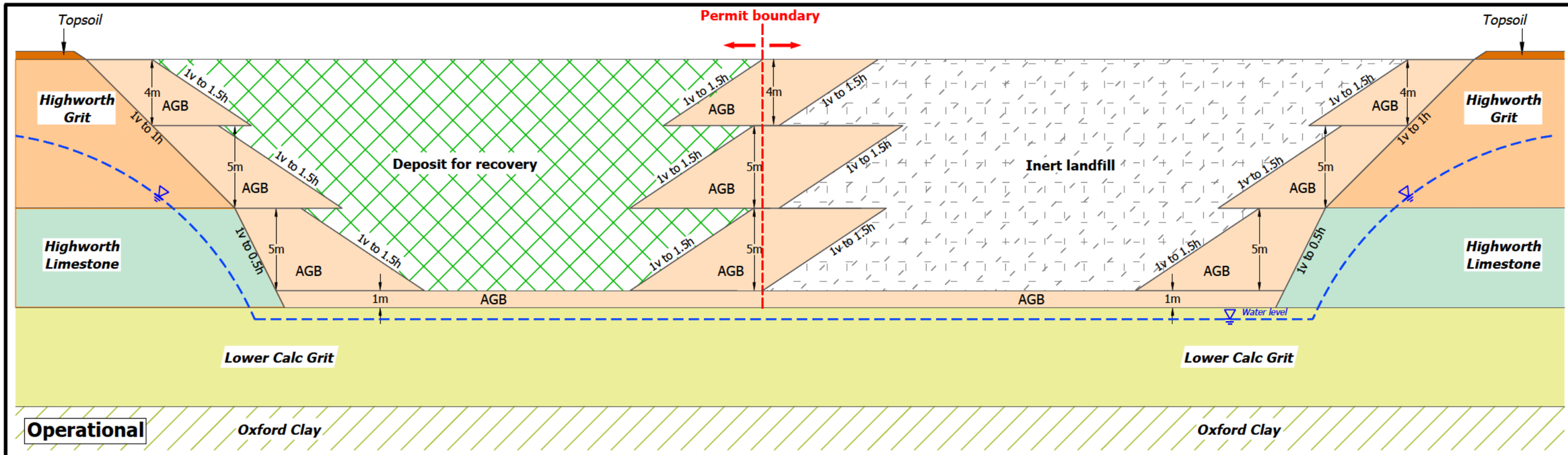
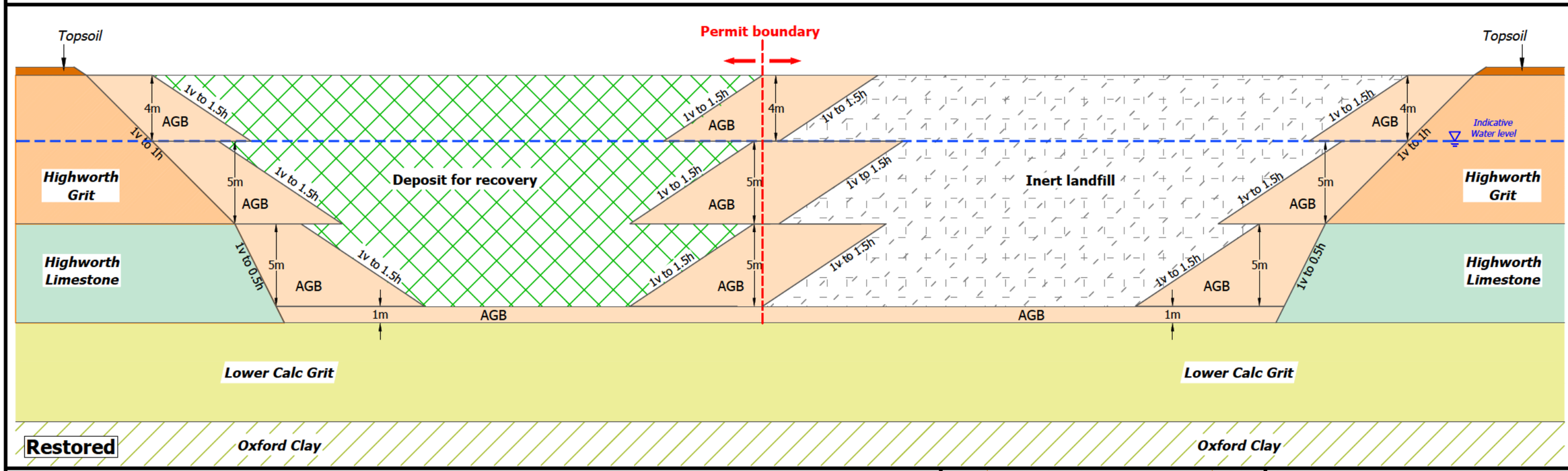
Registered Office: Upton House Market Street Charlbury Oxfordshire OX7 3PJ. UK

Date	Drawn	Checked	Scale
05.12.2025	SJ/EMB	DJ	1:5000 at A3

Drawing Ref	Drawing No	Version
SHELLQMA2512	1	a





Version	Revision and compilation notes	Date
a	Issued	05.12.2025

GWP consultants
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Registered Office: Upton House Market Street Charlbury Oxfordshire OX7 3PJ. UK

Client: Multi-Agg Limited

Project: Shellingford Quarry Landfill – Environmental Permit variation EPR/BP3095EU/V004

Schematic section through Artificial Geological Barrier

Date	Drawn	Checked	Scale
05.12.2025	SJ/EMB	DJ	1:250 at A3

Drawing Ref	Drawing No	Version
SHELLQMA2512	2	a

APPENDIX 5

Borehole logs

Marcus Hodges Environment Limited
Consulting Hydrogeologists and
Environmental Engineers

Project: Shellingford Quarry - 51976 | Borehole: BH1
Client: Multi-Agg Limited | Sheet 1 of 2
Contractor: ADS | Date: 20 Nov 2002

Strata

Description	Depth	Legend	Level	Point Load	Flush Return	TCR	SCR	RQD	FI	COMPL
Pale brown broken rubbly limestone with sandy clay - HEAD										
Hard grey LIMESTONE.	1.50		86.54							
	c 5									
Soft fine light orange SAND with bands of light grey and occasional 2-3cm clay lenses increasing with depth.	2.00		86.04							
Grey green fine SAND with discrete clay lenses.	7.50		80.54							
Green grey very fine SAND becoming silty with depth.	8.00		80.04							
Continued next sheet										

Drilling
Method: Rotary Open Hole
Rig: Dando 210
Borehole Dia (mm): 150 | Core Dia (mm)

Groundwater

Struck	Behaviour	Sealed
8.00	Slow seepage	

Progress

Depth	Casing	Water	Date
11.00	11.00	6.65	20/11/2002

Remarks
Air flush with ODEX system.

Logged by: JE | Scale: 1:50 | Symbols and abbreviations are explained on the accompanying key. All linear dimensions are in metres.

Marcus Hodges Environment Limited
Consulting Hydrogeologists and
Environmental Engineers

Project:	Shellingford Quarry - 51975	Borehole:	BH1
Client:	Multi-Agg Limited	Sheet 2 of 2	
Contractor:	ADS	Date:	20 Nov 2002

Strata

Strata

Description	Depth	Legend	Level	Point Load	Flush Return	TCR	SCR	RQD	FI	COMPL
Green grey very fine SAND becoming silty with depth.										
End of Borehole at 11.00 m	11.00		77.04							

Drilling

Method: Rotary Open Hole
Rig: Dando 210
Borehole Dia (mm) 150 Core Dia (mm)

Groundwater

Struck	Behaviour	Sealed
8.00	Slow seepage	

Progress

Depth	Casing	Water	Date
11.00	11.00	6.65	20/11/2002

Remarks
Air flush with CDEX system.

Logged by: JE Scale: 1:50 Symbols and abbreviations are explained on the accompanying key. All linear dimensions are in metres.

Marcus Hodges Environment Limited
Consulting Hydrogeologists and
Environmental Engineers

Project: Shellingford Quarry - 51976 | Borehole: BH4
Client: Multi-Agg Limited | Sheet 1 of 1
Contractor: ADS | Date: 21 Nov 2002

Strata

Strata

Description	Depth	Legend	Level	Point Load	Flush Return	TCR	SCR	RQD	FI	COMPL
Soft to very soft brown sandy clay with limestone gravel - HEAD										
Hard dark grey LIMESTONE	2.60		78.36							
	0.7									
Soft brown grey very sandy CLAY.	3.50		77.66							
Soft unconsolidated orange brown to yellow fine SAND.	4.00		77.16							
End of Borehole at 8.00 m	8.00		73.16							

Drilling

Method: Rotary Open Hole
Rig: Dando 120
Borehole Dia (mm): 150
Core Dia (mm):

Groundwater

Struck	Behaviour	Sealed
5.20	Medium inflow	

Progress

Depth	Casing	Water	Date
8.00	8.00	-	21/11/2002

Remarks
Air flush with ODEX system.

Logged by: JE Scale: 1:50 Symbols and abbreviations are explained on the accompanying key. All linear dimensions are in metres.

Marcus Hodges Environment Limited
Consulting Hydrogeologists and
Environmental Engineers

Project: Shellingford Quarry - 51976
Client: Multi-Agg Limited
Contractor: ADS

Borehole: BH6
Sheet 1 of 1
Date: 22 Nov 2002

Strata

Description	Depth	Legend	Level
MADE GROUND - Concrete.	0.15		88.62
Light brown sandy clay with limestone gravel - HEAD			
Hard pale grey LIMESTONE.	1.50		87.27
Soft unconsolidated fine orange brown to yellow SAND.	2.30		86.47
End of Borehole at 8.00 m	8.00		80.77

Point Load	Flush Return	TCR	SCR	RQD	FI	COMPL

Drilling

Method: Rotary Open Hole
Rig: Dando 210
Borehole Dia (mm): 150
Core Dia (mm):

Groundwater

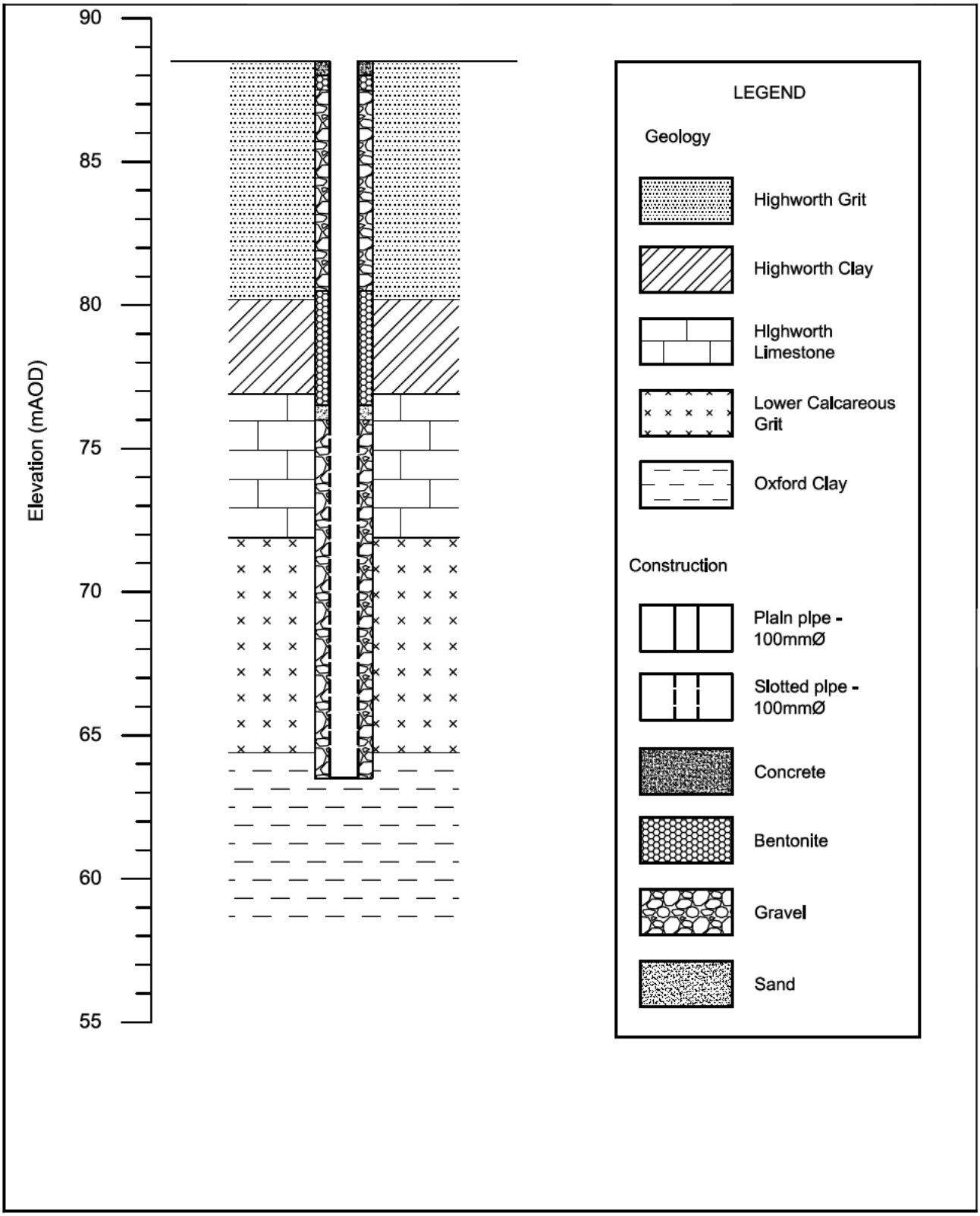
Struck	Behaviour	Sealed
5.00	Slow inflow	

Progress

Depth	Casing	Water	Date
8.00	8.00	6.80	22/11/2002

Remarks
Air flush with ODEX system.

Logged by: JE Scale: 1:50 Symbols and abbreviations are explained on the accompanying key. All linear dimensions are in metres.



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Griffin House, Market Street, Charlbury, OX7 3PJ

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Fax: +44(0)1608 810227
Email: admin@pgwassoc.co.uk

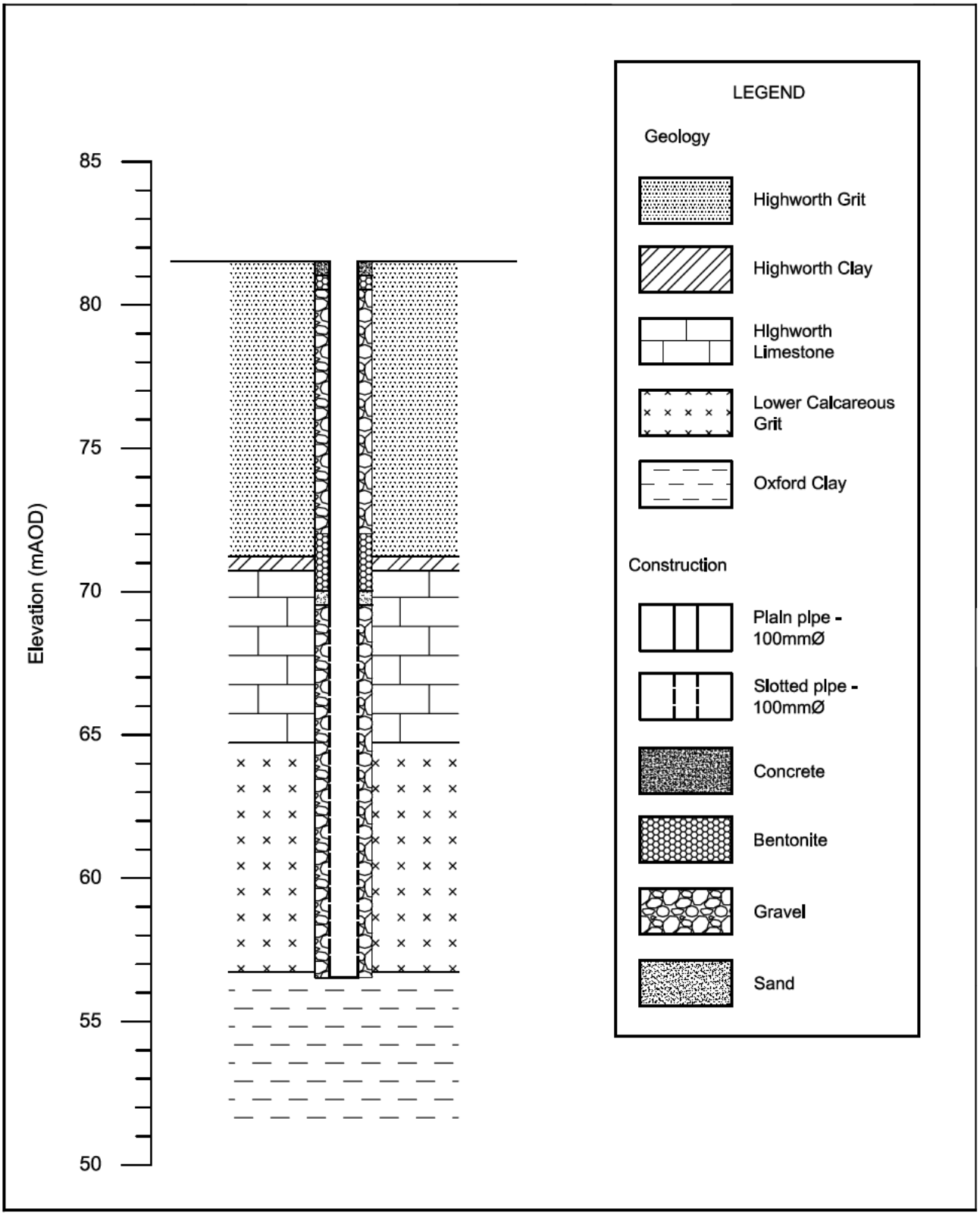
Rev	Revision and compilation notes	Date

Client: Earthline Ltd.

Project: Shellingford Quarry

Title: Borehole 02/09P

Drawn by	Checked	Approved	Rev
CA	MP	MP	
Date	Scale	Drawing No.	
09.09.2009	1:200 @ A4	SQL/0909/3	



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PGW&A LLP

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Email: admin@pgwassoc.co.uk

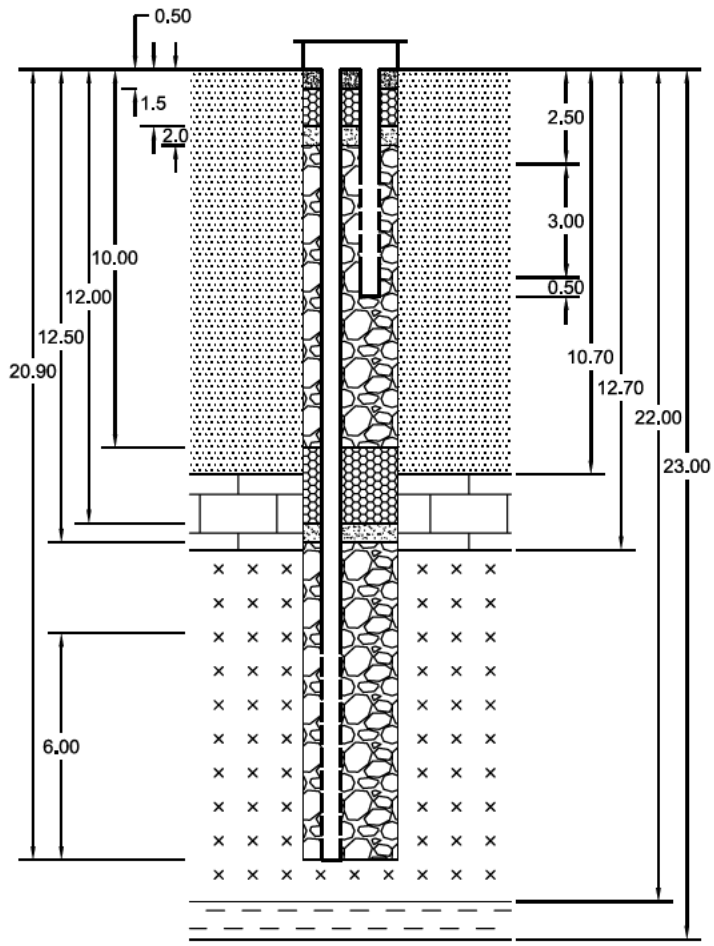
Rev	Revision and compilation notes	Date

Client: Earthline Ltd.

Project: Shellingford Quarry

Title: Borehole 04/09P

Drawn by	Checked	Approved	Rev
CA	MP	MP	
Date	**Scale**	**Drawing No.**	
09.09.2009	1:200 @ A4	SQL/0909/3	



LEGEND

Geology

- Highworth Grit
- Highworth Clay
- Highworth Limestone
- Lower Calcareous Grit
- Oxford Clay

Construction

- Plain pipe - 50mmØ
- Slotted pipe - 50mmØ - with geotextile wrap
- Lockable cap
- Concrete
- Bentonite
- Gravel
- Sand

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Rev	Revision and compilation notes	Date

Client: Earthline Ltd.

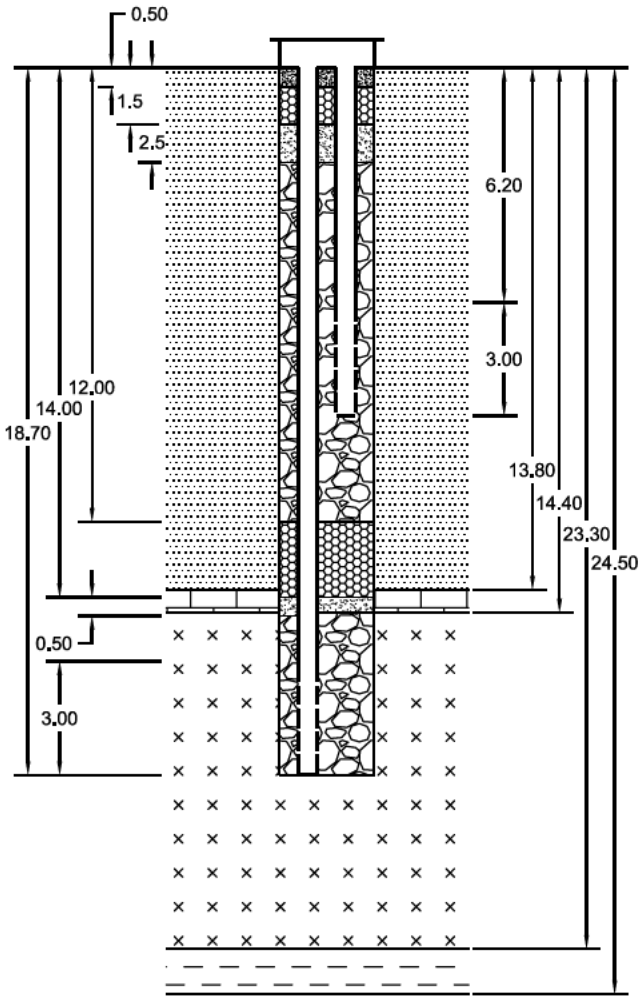
Project: Shellingford Quarry

Title: Borehole 02/11 A&B

Drawn by	Checked by	Approved by	Date
CA	RM	MP	18.11.2011

Scale	Dwg No.
V: 1:200, H: Not to scale @ A4	SQL/1111/BH02/11

BH 03/11
A B



LEGEND

Geology

- Highworth Grit
- Highworth Clay
- Highworth Limestone
- Lower Calcareous Grit
- Oxford Clay

Construction

- Plain pipe - 50mmØ
- Slotted pipe - 50mmØ - with geotextile wrap
- Lockable cap
- Concrete
- Bentonite
- Gravel
- Sand

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Rev	Revision and compilation notes	Date

Client: Earthline Ltd.

Project: Shellingford Quarry

Title: Borehole 03/11 A&B

Drawn by	Checked by	Approved by	Date
CA	RM	MP	18.11.2011

Scale	Dwg No.
V: 1:200, H: Not to scale @ A4	SQL/1111/BH03/11

Contract Name: Shellingford Quarry

Contract No:

Date: 23.9.15

Sheet 1 of 2 Working Day 3

APEX DRILLING SERVICES

DAILY DRILLING LOG

Tel: 01656 749149
E-mail: admin@apex-drilling.com

Client: Earth Line

Order No:

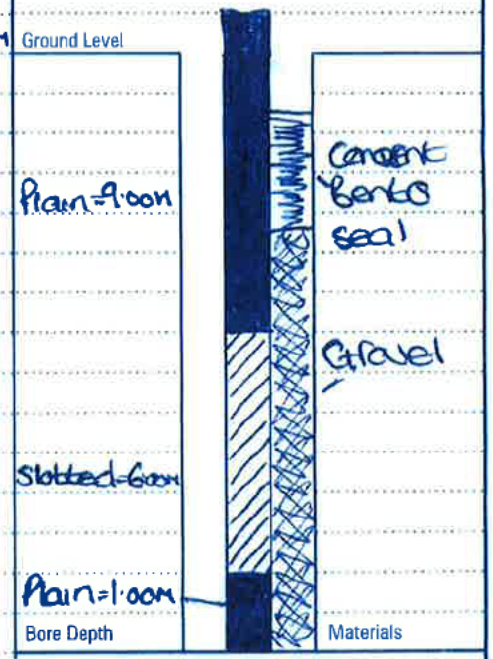
Driller: B. Jones Crewmen: J. Davies

Rig Type: Klemm 802

Bore Hole	Top Depth	Base Depth	Thickness	Recovery	Strata Description	Standing Time — Reason
BH4/15	Continued					
	9.00	9.30	0.30		Grey lime st Artesian flow	
	9.30	13.50	4.20		Silty Sandy Clay / Grey Sand bands	WS-9.50m
	13.50	19.00	5.50		Oxford Clay	
	INS 50mm Pezometer -			16.00m	+ Move BH 5/15.	
BH5/15						
	0.00	0.30	0.30		Top Soil	
	0.30	1.10	0.70		Weathered lime st	
	1.10	2.00	0.90		Grey Clay	
	2.00	3.00	1.00		Orange Sand	
	3.00	3.60	0.60		Brown Clay	
	3.60	4.10	0.50		Grey lime st	
	4.10	5.00	0.90		Orange Sand	
	5.00	6.20	1.20		Orange Sandy Clay	WS - 6.00m
	6.20	8.10	1.90		Grey Clay	
	8.10	10.00	1.90		Grey lime st	
	10.00	14.20	4.20		Grey Sand	Case - 8.00m
	14.20	14.60	0.30		Grey clay.	
	14.50	16.40	1.90		Grey lime st	WS - 15.00m

INSTALLATION DETAILS

Borehole No



Diameter: 50mm Ø
Well Casing: 10.00 m
Well Screen: 6.00 m
Gravel: 20 x 20 kg Sack m
Bentonite: 8.00 m
Gas Bung: 1 (No)
End Cap: 1 (No)
Cover Type: (RAISED) / FLUSH
Water Level: m
Remarks:

QUANTITIES

Site Moves: No	Casing: m	Core Boxes: No	Fixed Plant:
Bore Moves: No	Open Hole: m	Core Liner: m	
Return Moves: No	W. Samples: m	SPT/CPT: No	Standing Times: (hrs)
Security YES / NO	Coring: m	Installation: m	Breakdown: (hrs)

Signed by Apex:

Signed by Client: Date:

Blue – Client's Copy Yellow – QS Copy White – Site Copy

Contract Name: Shellingford Quarry

Contract No:

Date: 23.9.15

Sheet: 2 of: Working Day: 3

APEX DRILLING SERVICES

DAILY DRILLING LOG

Tel: 01656 749149
E-mail: admin@apex-drilling.com

Client: Earthline

Order No:

Driller: B. Jones Crewmen: J. Davies.

Rig Type: Klemm 802

Bore Hole	Top Depth	Base Depth	Thickness	Recovery	Strata Description	Standing Time — Reason
BH5/15	continued					
	16.40	17.50	1.10		Grey Silty Sandy Clay	
	17.50	17.80	0.30		Grey Lime St	
	17.80	23.90	6.10		Silty Sandy Clay	
	23.90	25.00	1.10		Oxford Clay	
	BH collapsed at 12.00m					
	Ream out down to 25.00m					
	BH collapsed at 12.00m				- 5" Hammer Required to drill through Lime Stone 8.10 – 10.00m	

INSTALLATION DETAILS

Borehole No

Ground Level

Bore Depth | Materials

Diameter ..... Ø
Well Casing ..... m
Well Screen ..... m
Gravel ..... m
Bentonite ..... m
Gas Bung ..... (No)
End Cap ..... (No)
Cover Type RAISED / FLUSH
Water Level ..... m
Remarks .....

QUANTITIES

Site Moves ..... No
Bore Moves ..... No
Return Moves ..... No
Security YES / NO

Casing ..... m
Open Hole ..... m
W. Samples ..... m
Coring ..... m

Core Boxes ..... No
Core Liner ..... m
SPT/CPT ..... No
Installation ..... m

Fixed Plant .....
Standing Times ..... (hrs)
Breakdown ..... (hrs)

Certificate No: 08750A

Signed by Apex .....

Signed by Client ..... Date .....

Blue – Client's Copy Yellow – QS Copy White – Site Copy

Contract Name: Shellingford Quarry

Contract No:

Date: 24.9.15

Sheet 1 of 1 Working Day 4

APEX DRILLING SERVICES

DAILY DRILLING LOG

Tel: 01656 749149
E-mail: admin@apex-drilling.com

Client: Earthline

Order No:

Driller: B. Jones Crewmen: J. Davies

Rig Type: Klemm 802

Bore Hole	Top Depth	Base Depth	Thickness	Recovery	Strata Description	Standing Time — Reason
					Drill to 17.50 With 192mm Bit	
					Case to 17.50 + Ream BH - 25.00m / BH collapsed 21.00m	
					INS 50mm Pezo to 21.00m	

INSTALLATION DETAILS

Borehole No

Ground Level

Bento / 6.00m

Gravel 8.00m

PLAIN 9.00m

SLOTTED 9.00m

PLAIN 3.00m

Bore Depth

Materials

Diameter 50mm Ø

Well Casing 12.00 m

Well Screen 9.00 m

Gravel 40 x 20KG Bags + 1/2 Ton m

Bentonite 10 Bags m

Gas Bung 1 (No)

End Cap 1 (No)

Cover Type (RAISED) / FLUSH

Water Level m

Remarks

QUANTITIES

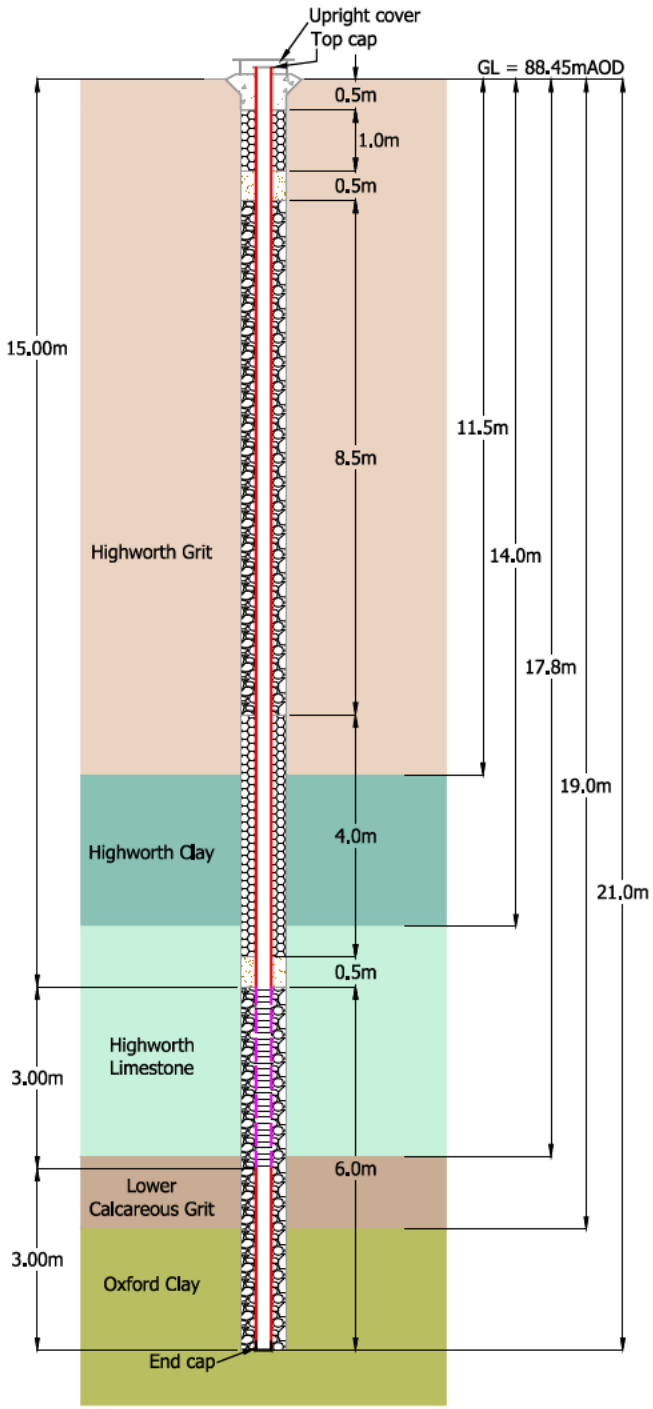
Site Moves	No	Casing	m	Core Boxes	No	Fixed Plant	
Bore Moves	No	Open Hole	m	Core Liner	m		
Return Moves	No	W. Samples	m	SPT/CPT	No	Standing Times	(hrs)
Security YES / NO		Coring	m	Installation	m	Breakdown	(hrs)

Signed by Apex

Signed by Client Date

Blue – Client's Copy Yellow – QS Copy White – Site Copy

BH01/19



LEGEND

Geology

- Highworth Grit
- Highworth Clay
- Highworth Limestone
- Lower Calcareous Grit
- Oxford Clay

Construction

- Plain pipe - 50mmø
- Slotted pipe - 50mmø with geotextile wrap
- Concrete
- Bentonite
- Sand
- Pea Gravel

Version	Revision and compilation notes	Date
A	Issued	06.03.2019

Client: Multi-Agg Ltd.

Project: Shellingford Quarry

BH01/19 installation details

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fax +44 (0)1608 810093
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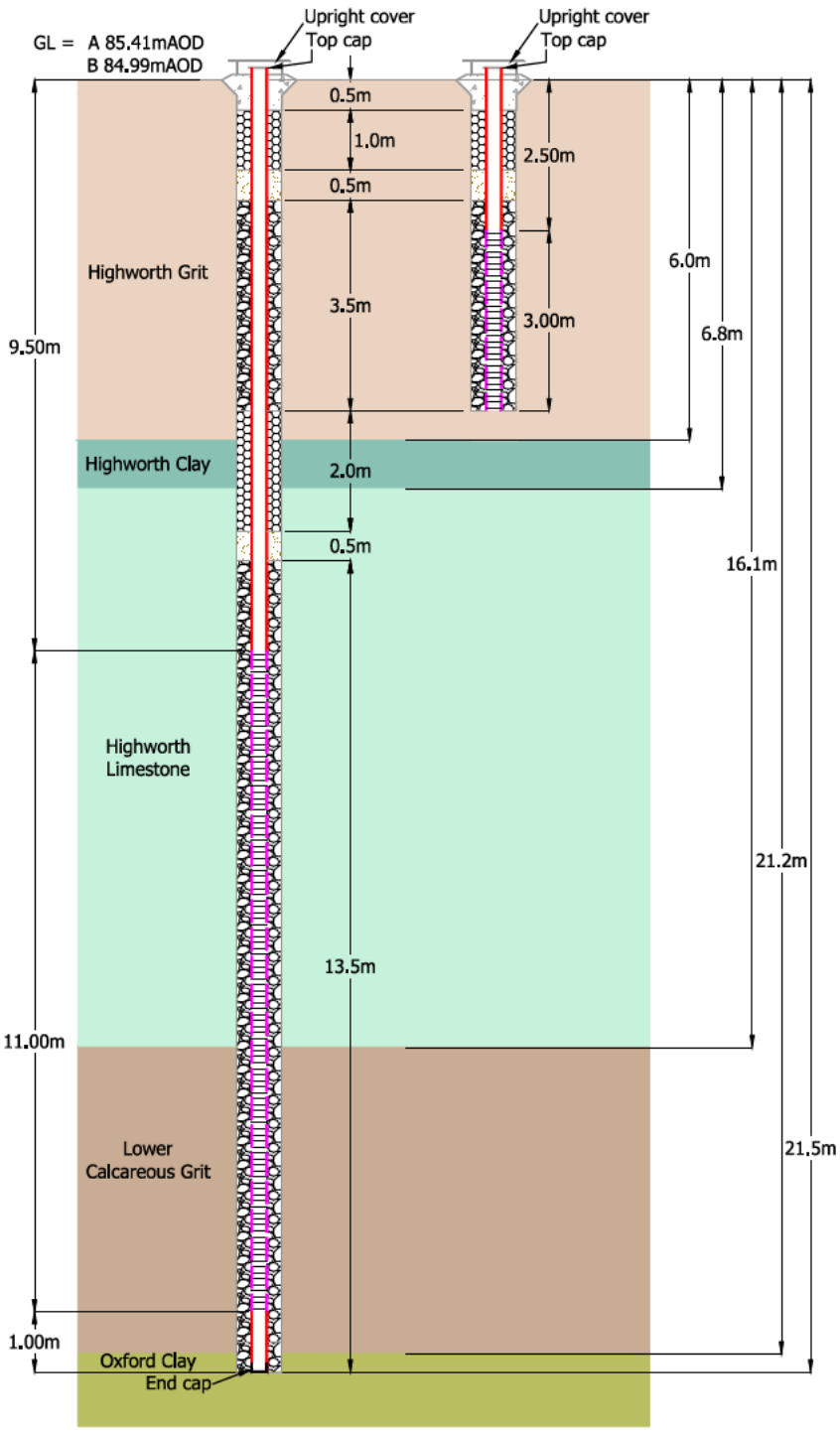
web www.gwp.uk.com
earth & water resources

Date	Drawn	Checked	Scale
06.03.2019	SK/EMB	*MP*	1:125 at A4

Drawing Ref	Drawing No	Version
SHELLQMA1901B	2	A

BH02/19 A+B



LEGEND

Geology

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- Oxford Clay

Construction

- Plain pipe - 50mmø
- Slotted pipe - 50mmø with geotextile wrap
- Concrete
- Bentonite
- Sand
- Pea Gravel

Version	Revision and compilation notes	Date
A	Issued	06.03.2019

Client: Multi-Agg Ltd.

Project: Shellingford Quarry

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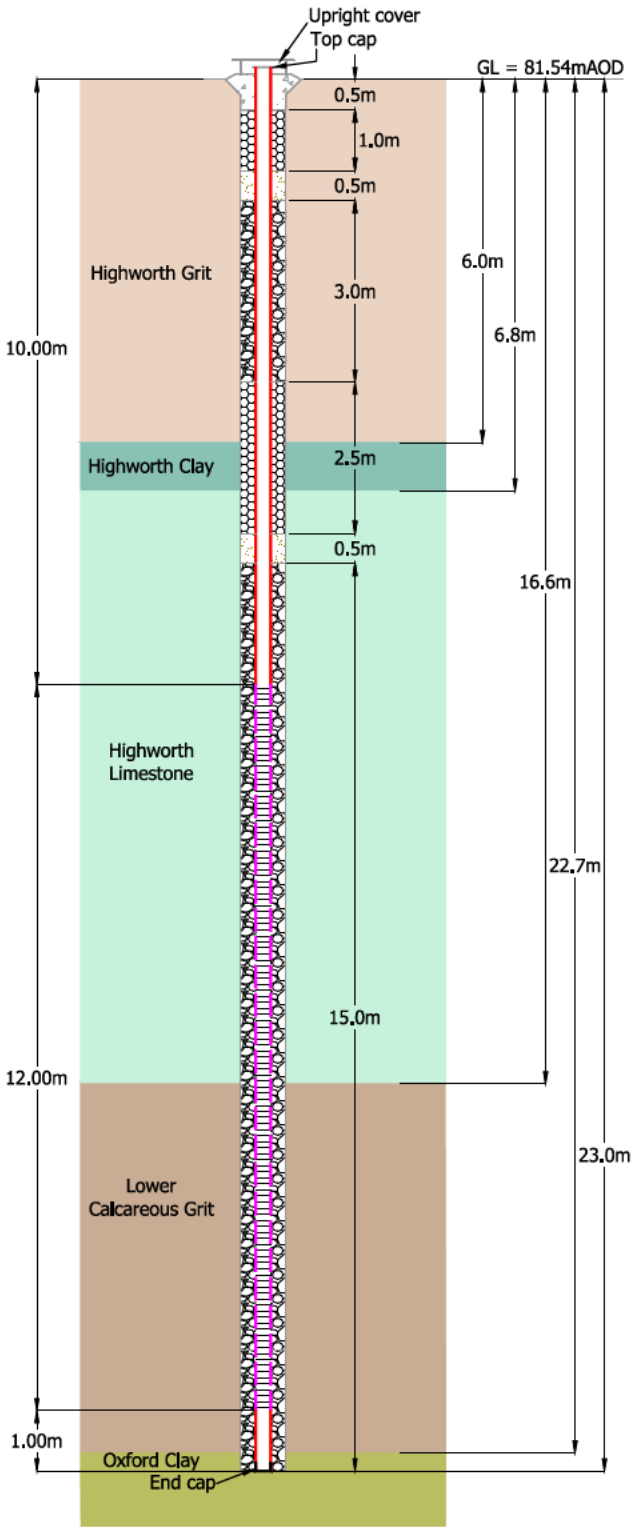
earth & water resources
GWP Consultants LLP. Registered No. OC326183.
Registered Office: Upton House, Market Street, Charlbury, Oxfordshire OX7 3PJ. UK

BH02/19 A+B installation details

Date	Drawn	Checked	Scale
06.03.2019	SK/EMB	*MP*	1:125 at A4

Drawing Ref	Drawing No	Version
SHELLQMA1901B	3	A

BH03/19



LEGEND

Geology

- Highworth Grit
- Highworth Clay
- Highworth Limestone
- Lower Calcareous Grit
- Oxford Clay

Construction

- Plain pipe - 50mmø
- Slotted pipe
- Concrete
- Bentonite
- Sand
- Pea Gravel

Version	Revision and compilation notes	Date
A	Issued	06.03.2019

Client: Multi-Agg Ltd.

Project: Shellingford Quarry

BH03/19 installation details

Date	Drawn	Checked	Scale
06.03.2019	SK/EMB	*MP*	1:125 at A4

Drawing Ref	Drawing No	Version
SHELLQMA1901B	4	A

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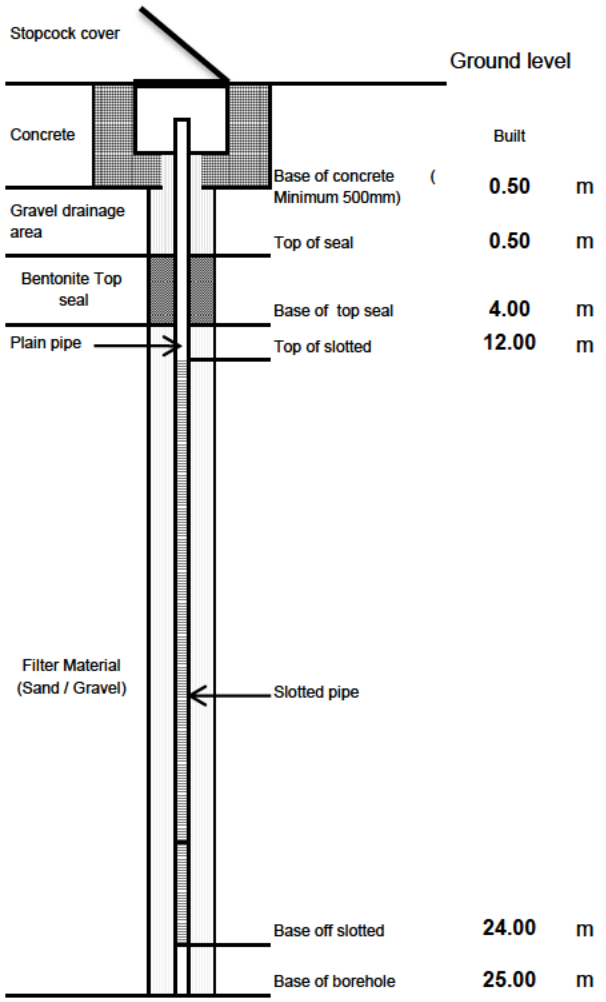
e-mail info@gwp.uk.com
web www.gwp.uk.com
earth & water resources

Marriott Geotechnical Drilling

Summary of Standpipe Installation

Schematic Diagram (not to scale)



Installation Details

Standpipe diameter (id)	50	mm
Borehole diameter	146	mm
Slot size	1	mm
Geosock	Yes	
Gas tap	None	
Filter type	Gravel	
Type of cover	Upright with lock	
Initial reading	5.60	m
Time of Initial reading	1500	hhmm

	Base (m)	Top (m)
Concrete	0.50	GL
Gravel drainage	0.50	0.50
Borehole seal top	4.00	0.50
Filter zone	25.00	4.00
Plain pipe	12.00	GL
Slotted zone	24.00	12.00
Base of borehole	25.00	

Remarks

Rig type	Comacchio GEO 300	**Project Title**			
Drilling Crew Details		Shellingford Quarry			
Support Operative	Danny Rae				
Lead Driller	Jeremy Joyce	**Project No**		16207	
Site category	Green	**Day**	Monday	**Date**	August 23, 2021
Engineer				**Borehole Number**	
Lead Driller's signature				**BH01/21**	

AGS

Produced by KeyLogbook

Marriott Geotechnical Drilling on behalf of GWP — Rotary Drilling Log

Depth of Stratum Top (m)	Driller's Stratum Description	Sample / Hole / Test Details: No	Type	Insitu test	From (m)	To (m)	Liner Dia (mm)	Drilling Details: Core run time (hhmm)	Total core Recovery (m)	Flush Return %	Flush Colour	Standard Penetration Test: Self Weight Pen (mm)	75 mm	150 mm	Seating Pen (mm)	75 mm	150 mm	225 mm	300 mm	Main Pen (mm)	N value	Casing Depth (m)	Water/ flush level (m)
0.00	LIMESTONE with bands of yellow SAND		RO		0.00	3.00		0005		100	grey											0.00	Dry
			RO		3.00	6.00		0005		100	yellow											0.00	Dry
			RO		6.00	9.00		0005		100	yellow											0.00	Dry
3.30	LIMESTONE		RO		9.00	12.00		0005		100	yellow											0.00	Dry
			RO		12.00	15.00		0005		100	grey											0.00	Dry
			RO		15.00	18.00		0000		100	grey											0.00	14.50
4.30	orange SAND		RO		18.00	21.00		0005		100	grey											0.00	17.50
			RO		21.00	24.00		0005		100	grey											0.00	20.50
			RO		24.00	25.00		0003		100	grey											0.00	23.50
9.00	orange SAND with bands of LIMESTONE																						
11.00	orange SAND with bands of CLAY																						
12.50	grey SILTY CLAY																						

Shift details

Start time (hhmm)	Hole (m)	Water (m)	Casing (m)
0830			
Finish time (hhmm)	Hole (m)	Water (m)	Casing (m)
1630			

Drilling Equipment Details

Casing (C) Open Hole (RO) Coring (RC)	Dia. (mm)	From (m)	To (m)	Barrel	Liner Type	Core Dia (mm)	Bit Type	Casing Type	Bit serial No	Flush	Polymer
C	146.00	0.00	25.00					146			
RO	146.00	0.00	25.00				PCD			Air	No

Ground Water Record

Time of strike	Depth Struck (m)	Casing (m)	Inflow	5 min	10 min	15 min	20 min	Depth Sealed (m)

Backfill (m)

Type	From (m)	To (m)

Time from	Duration (hhmm)	Remarks or details of any additional testing information, Dayworks
0830		CAT Scanned: Yes
0830		Permit Completed: Yes
1130	0030	Dayworks: Pulling drill rods
1200	0100	Hole bridged, Washed in casing from GL to 25.00m
1300	0200	Dayworks: Installing standpipe backfilling and pulling casing
1500	0100	Dayworks: Packing away rig and equipment and tracking rig to next borehole position

SPT I.D. Number	AR3407	Calibration Date	22/01/2021
SPT Rod Type	2 3/8 Regular	SPT Energy Ratio	65.44
Drilling Crew Details			CSCS No
Support Operative	Danny Rae		5753230
Lead Driller	Jeremy Joyce		1306879
Site category	Green		
Project Engineer			
Lead Driller's signature			

Project Title

Shellingford Quarry

Weather	Sunny	Project No	16207
Date	23/08/2021	Day	Monday
Rig type	Comacchio GEO 300	Borehole Number	
Inclination		Orientation	BH01/21
Sheet	1 of 1	Completed	Y

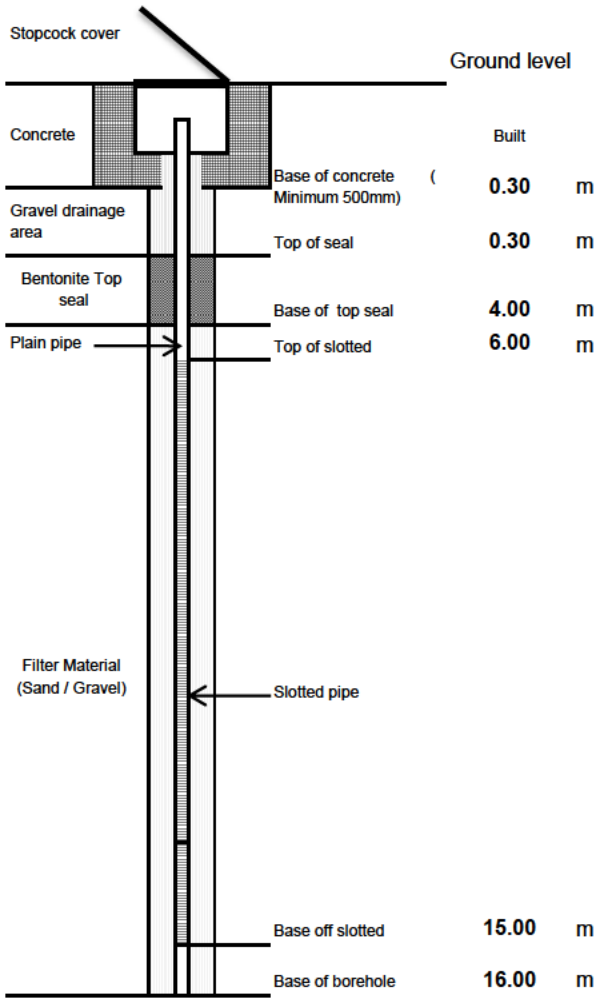
AGS

Produced by KeyLogbook

Marriott Geotechnical Drilling

Summary of Standpipe Installation

Schematic Diagram (not to scale)



Installation Details

Standpipe diameter (id)	50	mm
Borehole diameter	146	mm
Slot size	1	mm
Geosock	Yes	
Gas tap	None	
Filter type	Gravel	
Type of cover	Flush (cast)	
Initial reading	0.30	m
Time of Initial reading	1100	hhmm

	Base (m)	Top (m)
Concrete	0.30	GL
Gravel drainage	0.30	0.30
Borehole seal top	4.00	0.30
Filter zone	16.00	4.00
Plain pipe	6.00	GL
Slotted zone	15.00	6.00
Base of borehole	16.00	

Remarks

Rig type	Comacchio GEO 300	**Project Title**			
Drilling Crew Details		Shellingford Quarry			
Support Operative	Danny Rae				
Lead Driller	Jeremy Joyce	**Project No**		16207	
Site category	Green	**Day**	Thursday	**Date**	August 26, 2021
Engineer				**Borehole Number**	
Lead Driller's signature				**BH02/21**	

AGS

Produced by KeyLogbook

Marriott Geotechnical Drilling on behalf of GWP — Rotary Drilling Log

Depth of Stratum Top (m)	Driller's Stratum Description	Sample / Hole / Test Details: No	Type	Insitu test	From (m)	To (m)	Liner Dia (mm)	Drilling Details: Core run time (hhmm)	Total core Recovery (m)	Flush Return %	Flush Colour	Standard Penetration Test: Self Weight Pen (mm)	75 mm	150 mm	Seating Pen (mm)	75 mm	150 mm	225 mm	300 mm	Main Pen (mm)	N value	Casing Depth (m)	Water/ flush level (m)
			RO		1.20	3.00		0004		100	brown											0.00	Dry
0.00	TOPSOIL		RO		3.00	6.00		0005		100	grey											0.00	Dry
			RO		6.00	9.00		0005		100	grey											0.00	4.00
			RO		9.00	12.00		0005		100	grey											0.00	4.00
0.40	yellowish brown CLAY		RO		12.00	15.00		0005		100	grey											0.00	4.00
1.30	LIMESTONE with bands of grey CLAY																						
5.25	grey SAND																						

Shift details

Start time (hhmm)	Hole (m)	Water (m)	Casing (m)
0800			
Finish time (hhmm)	Hole (m)	Water (m)	Casing (m)
1605	15.00	4.00	0.00

Drilling Equipment Details

Casing (C) Open Hole (RO) Coring (RC)	Dia. (mm)	From (m)	To (m)	Barrel	Liner Type	Core Dia (mm)	Bit Type	Casing Type	Bit serial No	Flush	Polymer

Ground Water Record

Time of strike	Depth Struck (m)	Casing (m)	Inflow	5 min	10 min	15 min	20 min	Depth Sealed (m)

Backfill (m)

Type	From (m)	To (m)

Time from	Duration (hhmm)	Remarks or details of any additional testing information, Dayworks
0800		CAT Scanned: Yes
0800		Permit Completed: Yes
0800	0045	Dayworks: Filling water bowser
0845	0030	Inspection pit: Hand dug 1.20m x 0.50m x 0.50m
		General; 10:45 rig breakdown
		General; 11:00 heading back to yard to order and collect spare parts

SPT I.D. Number	AR3407	Calibration Date	22/01/2021
SPT Rod Type	2 3/8 Regular	SPT Energy Ratio	65.44
Drilling Crew Details			CSCS No
Support Operative	Danny Rae		5753230
Lead Driller	Jeremy Joyce		1306879
Site category	Green		
Project Engineer			
Lead Driller's signature			

Project Title

Shellingford Quarry

Weather	Sunny	Project No	16207
Date	24/08/2021	Day	Tuesday
Rig type	Comacchio GEO 300	Borehole Number	
Inclination		Orientation	BH02/21
Sheet	1 of 3	Completed	Y

AGS

Produced by KeyLogbook

Marriott Geotechnical Drilling on behalf of GWP — Rotary Drilling Log

Depth of Stratum Top (m)	Driller's Stratum Description	Sample / Hole / Test Details: No	Type	Insitu test	From (m)	To (m)	Liner Dia (mm)	Drilling Details: Core run time (hhmm)	Total core Recovery (m)	Flush Return %	Flush Colour	Standard Penetration Test: Self Weight Pen (mm)	75 mm	150 mm	Seating Pen (mm)	75 mm	150 mm	225 mm	300 mm	Main Pen (mm)	N value	Casing Depth (m)	Water/ flush level (m)

Shift details

Start time (hhmm)	Hole (m)	Water (m)	Casing (m)
0800	15.00	0.30	0.00
Finish time (hhmm)	Hole (m)	Water (m)	Casing (m)
1500	15.00	0.30	0.00

Drilling Equipment Details

Casing (C) Open Hole (RO) Coring (RC)	Dia. (mm)	From (m)	To (m)	Barrel	Liner Type	Core Dia (mm)	Bit Type	Casing Type	Bit serial No	Flush	Polymer

Ground Water Record

Time of strike	Depth Struck (m)	Casing (m)	Inflow	5 min	10 min	15 min	20 min	Depth Sealed (m)

Backfill (m)

Type	From (m)	To (m)

Time from	Duration (hhmm)	Remarks or details of any additional testing information, Dayworks
		General; 8:00 to 15:00 Striping down rig and replacing water pump and fan belt

SPT I.D. Number	AR3407	Calibration Date	22/01/2021
SPT Rod Type	2 3/8 Regular	SPT Energy Ratio	65.44
Drilling Crew Details			CSCS No
Support Operative	Danny Rae		5753230
Lead Driller	Jeremy Joyce		1306879
Site category	Green		
Project Engineer			
Lead Driller's signature			

Project Title

Shellingford Quarry

Weather	Sunny	Project No	16207
Date	25/08/2021	Day	Wednesday
Rig type	Comacchio GEO 300	Borehole Number	
Inclination		Orientation	BH02/21
Sheet	2 of 3	Completed	Y

AGS

Marriott Geotechnical Drilling on behalf of GWP — Rotary Drilling Log

Depth of Stratum Top (m)	Driller's Stratum Description	Sample / Hole / Test Details: No	Type	Insitu test	From (m)	To (m)	Liner Dia (mm)	Drilling Details: Core run time (hhmm)	Total core Recovery (m)	Flush Return %	Flush Colour	Standard Penetration Test: Self Weight Pen (mm)	75 mm	150 mm	Seating Pen (mm)	75 mm	150 mm	225 mm	300 mm	Main Pen (mm)	N value	Casing Depth (m)	Water/ flush level (m)
			RO		15.00	16.00		0003		100	grey											0.00	0.30
15.00	grey SAND																						

Shift details

Start time (hhmm)	Hole (m)	Water (m)	Casing (m)
0730	15.00	0.30	0.00
Finish time (hhmm)	Hole (m)	Water (m)	Casing (m)
1130			

Drilling Equipment Details

Casing (C) Open Hole (RO) Coring (RC)	Dia. (mm)	From (m)	To (m)	Barrel	Liner Type	Core Dia (mm)	Bit Type	Casing Type	Bit serial No	Flush	Polymer

Ground Water Record

Time of strike	Depth Struck (m)	Casing (m)	Inflow	5 min	10 min	15 min	20 min	Depth Sealed (m)

Backfill (m)

Type	From (m)	To (m)

Time from	Duration (hhmm)	Remarks or details of any additional testing information, Dayworks
1130	0130	General; 8:00 to 9:30 Fitting new radiator hoses and reassembeling rig Dayworks: Moving rig and drilling equipment to next borehole position

SPT I.D. Number	AR3407	Calibration Date	22/01/2021
SPT Rod Type	2 3/8 Regular	SPT Energy Ratio	65.44
Drilling Crew Details			CSCS No
Support Operative	Danny Rae		5753230
Lead Driller	Jeremy Joyce		1306879
Site category	Green		
Project Engineer			
Lead Driller's signature			

Project Title

Shellingford Quarry

Weather	Sunny	Project No	16207
Date	26/08/2021	Day	Thursday
Rig type	Comacchio GEO 300	Borehole Number	
Inclination		Orientation	BH02/21
Sheet	3 of 3	Completed	Y

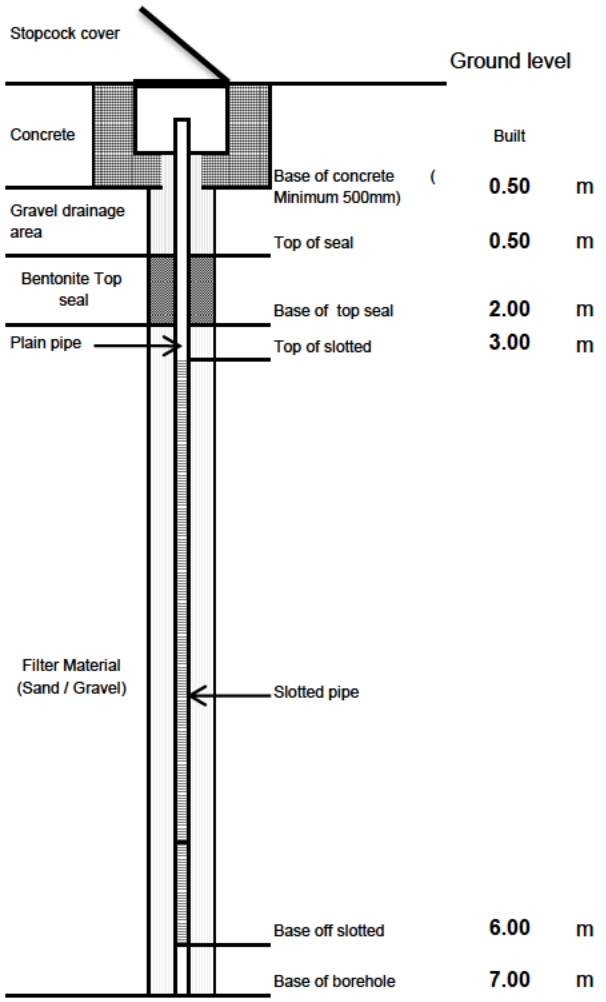
AGS

Produced by KeyLogbook

Marriott Geotechnical Drilling

Summary of Standpipe Installation

Schematic Diagram (not to scale)



Installation Details

Standpipe diameter (id)	50	mm
Borehole diameter	146	mm
Slot size	1	mm
Geosock	Yes	
Gas tap	Single	
Filter type	Gravel	
Type of cover	Upright with lock	
Initial reading	0.90	m
Time of Initial reading	1500	hhmm

	Base (m)	Top (m)
Concrete	0.50	GL
Gravel drainage	0.50	0.50
Borehole seal top	2.00	0.50
Filter zone	7.00	2.00
Plain pipe	3.00	GL
Slotted zone	6.00	3.00
Base of borehole	7.00	

Remarks

Rig type	Comacchio GEO 300	**Project Title**			
Drilling Crew Details		Shellingford Quarry			
Support Operative	Danny Rae				
Lead Driller	Jeremy Joyce	**Project No**		16207	
Site category	Green	**Day**	Thursday	**Date**	August 26, 2021
Engineer				**Borehole Number**	
Lead Driller's signature				**BH03/21**	

AGS

Produced by KeyLogbook

Marriott Geotechnical Drilling on behalf of GWP — Rotary Drilling Log

Depth of Stratum Top (m)	Driller's Stratum Description	Sample / Hole / Test Details: No	Type	Insitu test	From (m)	To (m)	Liner Dia (mm)	Drilling Details: Core run time (hhmm)	Total core Recovery (m)	Flush Return %	Flush Colour	Standard Penetration Test: Self Weight Pen (mm)	75 mm	150 mm	Seating Pen (mm)	75 mm	150 mm	225 mm	300 mm	Main Pen (mm)	N value	Casing Depth (m)	Water/ flush level (m)
			RO		1.20	3.00		0003		100	brown											0.00	Dry
0.00	TOPSOIL		RO		3.00	6.00		0005		100	grey											0.00	3.00
			RO		6.00	7.00		0003		100	grey											0.00	0.90
0.60	yellowish brown CLAY																						
2.50	LIMESTONE with bands of CLAY																						
3.00	grey CLAY																						
5.00	grey CLAY with bands of LIMESTONE																						

Shift details

Start time (hhmm)	Hole (m)	Water (m)	Casing (m)
1300			
Finish time (hhmm)	Hole (m)	Water (m)	Casing (m)
1700			

Drilling Equipment Details

Casing (C) Open Hole (RO) Coring (RC)	Dia. (mm)	From (m)	To (m)	Barrel	Liner Type	Core Dia (mm)	Bit Type	Casing Type	Bit serial No	Flush	Polymer

Ground Water Record

Time of strike	Depth Struck (m)	Casing (m)	Inflow	5 min	10 min	15 min	20 min	Depth Sealed (m)

Backfill (m)

Type	From (m)	To (m)

Time from	Duration (hhmm)	Remarks or details of any additional testing information, Dayworks
1300		CAT Scanned: Yes
1300		Permit Completed: Yes
1300	0015	Inspection pit: Hand dug 1.20m x 0.50m x 0.50m
1500	0130	Taking rig and equipment back to carpark

SPT I.D. Number	AR3407	Calibration Date	22/01/2021
SPT Rod Type	2 3/8 Regular	SPT Energy Ratio	65.44
Drilling Crew Details			CSCS No
Support Operative	Danny Rae		5753230
Lead Driller	Jeremy Joyce		1306879
Site category	Green		
Project Engineer			
Lead Driller's signature			

Project Title

Shellingford Quarry

Weather	Sunny	Project No	16207
Date	26/08/2021	Day	Thursday
Rig type	Comacchio GEO 300	Borehole Number	
Inclination		Orientation	BH03/21
Sheet	1 of 1	Completed	Y

AGS

Produced by KeyLogbook

APPENDIX 6

Enhanced pre-application advice EPR/BP3095EU/P001 (EA Invoice No. 414251) payment evidence

HSBC UK

Earthline Limited

Make a bill payment

1. Payee details > 2. Payment details > 3. Check and... > 4. Confirmation

Done! Payment created.

[redacted]