



Lidl Great Britain Limited

Validation Report

Lidl, Hollow Lane, Shinfield

December 2024

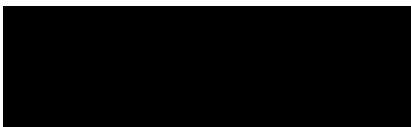


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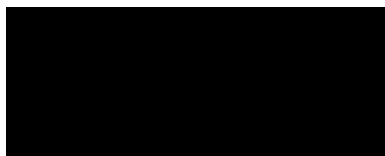
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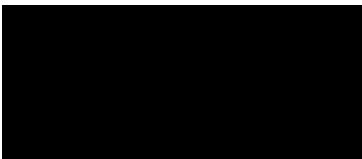
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Drawings

21-1484-P/05/A	Clean Cover Verification Plan
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Appendices

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Appendix B	Verification Completion Report for Ground Gas Protection Systems
Appendix C	Concrete Classification Data
Appendix D	Topsoil Analysis Report and Verification Photographs
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1 Introduction

Obsidian Geo-Consulting Ltd (Obsidian) was commissioned by Lidl Great Britain Limited (the Client) to produce a Validation Report for their proposed development site at Hollow Lane, Shinfield.

Lidl propose to develop the site with the construction of a new Lidl store building located in the western half of the site with car parking in the east and associated, access and peripheral soft landscaping.

The site has been the subject of several previous phases of ground investigation and assessment as detailed in the following reports:

- Obsidian Geo-Environmental Desk Study Report Ref. 21-1484-P-R1-A dated May 2022.
- Obsidian Geo-Environmental Investigation Report Ref. 21-1484-P-R2 dated October 2022.
- Asbestos in Soil Investigation Letter Report Ref. JD/21-1484-P/L003 dated 7th March 2024.
- Obsidian Geo-Environmental Remediation Strategy Report Ref. 21-14-84 dated 30th April 2024.

This document should be read in conjunction with the previous reports.

1.1 Objective

The objective of this document is to validate, where possible, the actions undertaken during the site enabling and construction works in accordance with the agreed strategy and methodology for addressing and mitigating the residual contamination risks identified by the previous reports, listed above.

1.2 Limitations

This report has been prepared by Obsidian with all reasonable skill, care and attention within the terms of the Contract with the Client and taking account of the information made available by the Client, as well as the manpower and resources devoted to it by agreement with the Client. Obsidian disclaims any responsibility to the Client and others in respect of any matters outside the scope of the above Contract.

This report has been produced on behalf of the Client and no responsibility is accepted to any Third Party for all or any part. This report should not be relied upon or transferred to any other parties without the express written authorisation of Obsidian. If any unauthorised Third Party comes into possession of this report, they rely on it at their own risk and the authors owe them no duty of care or skill.

Any plans appended to this report should not be used for scaling purposes.

2 Remediation Strategy

As no widespread levels of contamination were identified during previous phases of investigation, only isolated deployment of mitigation measures were recommended in order to remove the potential migratory pathways with respect to human health and construction materials for the following elements:

- Ensure an Asbestos register is established and updated throughout the works to locate and track the presence of ACMs across the site.
- Installation of barrier pipe to be used when installing new drinking water pipes.



- Installation of a membrane within the proposed floor slab which satisfies the requirements of Characteristic Situation 2.
- The specification and use of concrete with a Design Sulphate Class DS-3 and an ACEC (Aggressive Chemical Environment for Concrete) Class AC-3 across all areas of the site.
- Inclusion of a capping layer (minimum 450mm) of clean cover and the placement of a high visibility alarm membrane acting as a separation layer within proposed soft landscaped areas. Remaining asbestos will be contained beneath hardstanding materials or removed as part of the initial site strip or foundation excavations.

2.1 Asbestos within Made Ground

Two positive identifications for chrysotile asbestos, were recorded within samples of the Made Ground soil matrix in two locations within the south-eastern area of the site in WS01 at 0.50m bgl in the form of loose fibres and within WS106 at 0.70m bgl in the form of loose fibres and visible asbestos cement fragments. Asbestos was not identified within any of the other samples analysed across either investigation phase.

Based on the concentrations quantified across the investigation phases, it was considered that the risk posed to future site users was low with the potential to become low/negligible providing mitigation measures were implemented. The recommended mitigation measures comprising the removal of Made Ground when constructing the proposed foundations and containment of remnant fibres beneath either hardstanding or in soft landscaped areas under a suitable thickness (minimum 450mm) of clean cover and the placement of a high-visibility alarm membrane acting as a separation layer at the base of the clean cover.

Given that Asbestos will potentially remain on site both during and after construction the client/contractor should establish and maintain an Asbestos register which will locate and track the presence of ACMs beneath the site. This should be made available to contractors prior to any future proposed excavation works, including the maintenance of buried services and plant and should comprise a compilation of asbestos test data and drawings identifying the recorded locations, as produced within the Asbestos Location Plan within the RMS.

2.2 Drinking Water Pipe Selection

It should be noted that no widespread hydrocarbon-based contaminants were detected by investigations undertaken by Obsidian. However, in light of the site history and localised areas of hydrocarbon detection, the potential risks to buried, PE drinking water pipes could not be ruled out. The use of a barrier pipe system such as Protecta-Line or similar were recommended for use to remove any potential residual risks.

It is therefore recommended that the local water authority be consulted with regards to the selection of drinking water pipe materials to be used on site.

Evidence of discussions with the local authority and evidence of the eventual pipe selected and used on site should be presented to Obsidian for review and inclusion within this validation report.

2.3 Gas Membrane Installation

The GSVs classify the site as Characteristic Situation 2 (Low Risk) whereby basic ground gas protective measures are required for the proposed building on site.

In accordance with BS8485:2015+A1:2019 Code of Practice for the Design of Protection Measures for Ground Gas, the proposed development is classified as a Type C building type. For a Characteristic Situation 2 scenario, a gas protection score of at least 2.5 points is required.



A score of 2.5 points can be achieved through the following:

- Cast in situ ground-bearing floor slab (with only nominal mesh reinforcement) (0.5 points).
- Cast in situ monolithic reinforced ground bearing raft or reinforced cast in situ suspended floor slab with minimal penetrations (1 to 1.5 points).
- Installation of a methane and carbon dioxide resistant membrane within the floor slab construction meeting the requirements of Table 7 of BS8485:2015+A1:2019. (2 points).

The installation of the ground gas mitigation measures should be undertaken and verified by an appropriately qualified contractor. Evidence of the approved, installed and verified ground gas mitigation measures including as built drawings and a photographic record should be made available to Obsidian for inclusion in the final verification report.

2.4 Concrete Classification

The results of the pH and water-soluble sulphate testing indicated that the risk posed to future buried concrete structures is medium. The results indicated that the Made Ground beneath the site falls within Design Sulphate Class DS-3 and ACEC (Aggressive Chemical Environment for Concrete) Class AC-3.

Evidence of the concrete used on site (stating the DS and AS classes used) should be presented to Obsidian for review and inclusion within the validation report. This can be obtained from the concrete supplier/batcher.

2.5 Capping of Soft Landscaping

Where Made Ground is anticipated to remain following rationalisation of final development formation levels, the soft landscaping should include a high-visibility alarm membrane acting as a separation layer, overlain by 450mm of clean verified topsoil/subsoil.

The composition of the topsoil should be verified in advance of it being received on site. Chemical analysis results are to be obtained from the topsoil supplier and compared with appropriate metals, phenol, cyanide, PAH, TPH, BTEX and asbestos screening values in line with the proposed end use. If acceptable, the topsoil will then be imported to site and placed.

The imported material should meet the following verification criteria which are also based on screening values for the Commercial end use scenario.

Table 2.1: Proposed Imported Topsoil Verification Criteria

Determinand	OB-Screen Value (mg/kg)
Metals	
Arsenic	640
W/S Boron	240,000
Cadmium	410
Chromium (hexavalent)	49
Copper	68,000
Lead	2,300
Mercury	1,100
Nickel	980
Selenium	12,000
Zinc	730,000
PAH	
Naphthalene	460
Acenaphthylene	97,000
Acenaphthene	97,000



Determinand	OB-Screen Value (mg/kg)
Fluorene	68,000
Phenanthrene	22,000
Anthracene	540,000
Fluoranthene	23,000
Pyrene	54,000
Benzo(a)anthracene	170
Chrysene	350
Benzo(b)fluoranthene	44
Benzo(k)fluoranthene	1,200
Benzo(a)pyrene	35
Indeno(1,2,3-cd)pyrene	510
Dibenz(a,h)anthracene	3.6
Benzo(ghi)perylene	4,000
Other	
Cyanide	34
Total Phenols (monohydric)	690
Asbestos	Absent
Aliphatic TPH Fractions	
Aliphatic C ₅ -C ₆	5,900
Aliphatic C ₆ -C ₈	17,000
Aliphatic C ₈ -C ₁₀	4,800
Aliphatic C ₁₀ -C ₁₂	23,000
Aliphatic C ₁₂ -C ₁₆	82,000
Aliphatic C ₁₆ -C ₂₁	1,700,000
Aliphatic C ₂₁ -C ₃₅	1,700,000
Aromatic TPH Fractions	
Aromatic C ₅ -C ₇	27
Aromatic C ₇ -C ₈	110,000
Aromatic C ₈ -C ₁₀	8,100
Aromatic C ₁₀ -C ₁₂	28,000
Aromatic C ₁₂ -C ₁₆	37,000
Aromatic C ₁₆ -C ₂₁	28,000
Aromatic C ₂₁ -C ₃₅	28,000
BTEX Compounds	
Benzene	27
Toluene	110,000
Ethyl benzene	13,000
m-Xylene	14,000
p-Xylene	14,000
o-Xylene	15,000
MTBE	7,900

The depth of the placed topsoil should be validated by a Geo-Environmental Engineer with the excavation and inspection of hand pits once the topsoil has been laid.

2.1 General Procedures

All validation samples will be clearly labelled with the site name, sample location, sample depth and sample date, stored upside down in cool boxes with chilled ice packs and couriered to a chemical laboratory.

All soil validation sample test results will be included within a Remediation Validation Report (this report).



Any contaminated soils for off-site disposal will be transported by road lorry under Duty of Care from the site to a suitably licensed waste management facility for treatment/disposal. Waste transfer notes for all materials removed off-site will be retained during the remedial works.

3 General Comments

3.1 Protection of Site Workers

The Demolition Contractor/Ground Works Contractor will be responsible for implementing appropriate procedures to protect site workers from exposure to any potentially contaminated materials. This should include, as a minimum, provision of basic Personal Protective Equipment (PPE) including hard hats, gloves, coveralls and steel toe-capped boots at all times, providing washing facilities, and forbidding eating, drinking and smoking at all times except in designated areas.

When working in areas potentially impacted by asbestos, Personal Respiratory Equipment (RPE) should be provided.

The Demolition Contractor/Ground Works Contractor is also responsible for implementing appropriate techniques to reduce the spread of potentially contaminated materials across the remainder of the site and surrounding properties during the works. This should include covering spoil to prevent the spread of dust, sealing surface water runoff to prevent the pollution of surface water drains and sewers and cleaning and washing boots, vehicle wheels and other equipment to prevent the spread of mud.

3.2 Unforeseen Ground Conditions

If ground conditions differ significantly from those encountered during the previous ground investigations or should additional areas of potentially contaminated materials be identified during the works, the Demolition Contractor/Ground Works Contractor should suspend site redevelopment works in the subject area immediately and inform the Client. The suspect material should then be inspected and assessed by a Geo-Environmental Engineer.

3.3 Waste Disposal

The reuse of soils as engineered fill should be undertaken in accordance with an appropriate Environment Agency licence as defined in the statutory guidance on the Definition of Waste or CL:AIRE Code of Practice.

A level 1 waste characterisation of all the recorded chemical laboratory analysis results across the site would indicate that a Non-Hazardous Waste classification is likely to be appropriate for the majority of the Made Ground on site with the exception of the Made Ground in WS03. In WS03, the concentration of Zinc may require a Hazardous Waste classification. The WAC analysis confirmed that a Stable Non-Reactive Hazardous classification would be appropriate, for the Made Ground in WS03, which is a sub-division on Hazardous Waste.

WAC testing undertaken on the Made Ground in WS08 suggests that the Made Ground in this area meets an Inert Waste classification, which is a sub-category of Non-Hazardous, however the WAC analysis of a Made Ground sample from WS10 indicated that this material should remain as Non-Hazardous and not sub-categorised as Inert Waste. This illustrates the variability of the Made Ground.

The quantification analysis undertaken confirmed the presence of asbestos within the WS106 at 0.021% which falls below the commonly accepted hazardous waste classification of 0.1%. Therefore,



the asbestos within the soil matrix falls within a Non-Hazardous Waste classification, where removed off-site as waste.

However, visible ACMs were recorded within the soil profile at this location, and these would attract a hazardous waste classification. Hand picking and careful segregation of visible asbestos from the soil matrix is likely to be sufficient to mitigate this so that soil matrix materials removed from site would not constitute a hazardous waste classification. Only the handpicked fragments would be classified as Hazardous. These should be bagged and removed separately where encountered.

Once the actual stockpiles of surplus materials have been formed, it may be possible to further classify the individual stockpiles by undertaking further testing.

The natural strata on site would be classified as default Inert Waste.

4 Verification and Validation

4.1 Introduction

The Client have appointed Tinnelly Construction Ltd to undertake the groundworks and construction works at the site.

Confirmation of the barrier pipes, gas membrane installation and concrete used for the construction of the building have been provided to Obsidian.

The clean capping layer in the landscaping areas has also been verified by an Obsidian engineer.

4.2 Validation of Drinking Water Pipe Selection

It was recommended that the local water authority be consulted with regards to the selection of drinking water pipe materials to be used on site. It is not clear whether this consultation had taken place. We have been advised by Lidl that the SLA Barrier Pipe system has been installed, manufactured by Egeplast UK. Lidl have provided Obsidian with a selection of photographs, taken by Lidl at the time of installation and a specification sheet for the installed pipe system. These are included in Appendix A.

4.3 Validation of Gas Membrane Installation

On the 23rd of April 2024 the installation of the Proprietary Gas Resistant Membrane for the protection of properties from ground gas was inspected by GeoEnginSeer Ltd. They confirmed that a Solshield Ultra Gas Barrier had been installed and silver Detailing Strip was used to detail corners and pipes. They also confirmed that the condition of the membrane was good and had been installed to an exceptionally high standard, with only a few minor repairs being necessary.

The report produced by GeoEnginSeer Ltd has been included in Appendix B.

4.4 Validation of Concrete Classification

The results of the pH and water-soluble sulphate testing indicate that the risk posed to future buried concrete structures is medium. The results indicate that the Made Ground beneath the site falls within Design Sulphate Class DS-3 and ACEC (Aggressive Chemical Environment for Concrete) Class AC-3. The RMS specified that evidence of the concrete used on site and stating the DS and AS classes used should be presented to Obsidian for review and inclusion within the validation report.

Obsidian have been provided design drawing and a specification sheet from SDS and concrete testing certificates from Simtec Materials Testing Ltd which confirm that a concrete class of C25/30



with a maximum water/cement ration of 0.40 has been used within the concrete on site in accordance with the requirements of a DS-3 and AC-3 concrete classification.

The design and specification documents and test certificates are included in Appendix C.

4.5 Validation of Soft Landscaping Capping

The RMS specified that in the proposed, peripheral soft landscaped areas, where Made Ground was anticipated to remain following rationalisation of final development formation levels, the soft landscaping should include a geotextile, overlain by 450mm of clean verified topsoil/sub-soil.

It was also recommended that the composition of the topsoil/subsoil should be verified in advance of it being received on site. Chemical analysis results were to be obtained from the topsoil supplier and compared with appropriate metals, PAH, TPH, BTEX and asbestos screening values in line with the proposed end use. If acceptable, the topsoil will then be imported to site and placed.

The imported material should meet the verification criteria set out in Table 2.1 which are based on screening values for a Commercial end use scenario.

On the 31st October 2024, Obsidian visited the site for the purpose of validating the soft landscaping capping. However, it was noted that site-won Made Ground soils had been placed below a thin layer of clean Topsoil. As this was not in the specification, Obsidian advised that this was stripped and the correct clean capping layer installed to the correct thickness.

Obsidian returned to verify the clean capping layer on the 20th November 2024. The records and observations are discussed in the following sections.

4.5.1 Hand Pit HP101

Validation hand pit HP101 was positioned within the strip of soft landscaping in the northwestern corner of the site. Some turf had already been laid in the western half of this area; the eastern half was still to have Topsoil installed. The hand pit was excavated to 0.40m bgl in the turfed area. A geotextile membrane was observed at the base of the pit. The Topsoil was described as a dark brown, slightly gravelly, clayey sand. Gravel included occasional quartzite and flint. As the installation of Topsoil in this area had not been wholly completed at the time of the hand dug pit, the thickness of the capping layer could be corrected. An Obsidian engineer remained in attendance whilst this area was completed and confirmed enough soil had been imported to this location without the need of an additional hand dug pit.

4.5.2 Hand Pit HP102

Validation hand pit HP102 was located in the northeastern corner of the site. The hand dug pit was excavated to 0.45m bgl, where a geotextile membrane was encountered. The Topsoil was described as a dark brown, slightly gravelly, sandy clay. The gravel included occasional quartzite and flint. A membrane and chippings as well as some plants had already been installed in this location.

4.5.3 Hand Pit HP103

Validation hand pit HP103 was located in the eastern corner of site. The hand dug pit was excavated to 0.45m bgl, where a geotextile membrane was encountered. The Topsoil was described as a dark brown, slightly gravelly, clayey sand. The gravel included occasional quartzite and flint. A membrane and chippings as well as some plants had already been installed in this location.

4.5.4 Hand Pit HP104

Validation Hand Pit HP104 was located along the southern boundary of site. The hand dug pit was excavated to 0.35m bgl, where a geotextile membrane was encountered. The membrane had been installed on top of ducting, which had already been installed prior to the clean capping layer correction. The Topsoil was described as a dark brown, slightly gravelly, clayey sand. The gravel



included occasional quartzite and flint. A membrane and chippings as well as some plants had already been installed in this location.

4.5.5 Hand Pit HP105

Validation Hand Pit HP105 was also located along the southern boundary of the site. The hand dug pit was excavated to 0.35m bgl, where a geotextile membrane was encountered. The membrane had been installed on top of ducting, which had already been installed prior to the clean capping layer correction. The Topsoil was described as a dark brown, slightly gravelly, clayey sand. The gravel included occasional quartzite and flint. A membrane and chippings as well as some plants had already been installed in this location. Although the proposed thickness of 0.45m of clean soil was not encountered within HP105, it is considered that the presence of the ducting beneath 0.35m of clean cover is sufficient to break to potential pollutant linkages to human health.

4.5.6 Imported Material

An unknown amount of clean capping material was imported to the site, sourced from Eversley Quarry. This material was assessed and tested by Tim O'Hare Associates prior to it being imported. The sample they tested was described as being pale yellow, slightly moist, non-plastic slightly calcareous, loamy sand with rare gravel and a moderate proportion of organic fines and woody fragments. It should be noted that this description differs from the description of the verification hand pits. The soil imported to the site was described as being dark brown rather than pale yellow. The material was also tested to assess its suitability for use as a clean capping material. The sample did not record any contaminants exceeding the criteria as set out in Table 2.1. This report is included in Appendix D.

An environmental sample was taken from the material encountered in HP103 and scheduled for a suite of analyses at the UKAS and MCERTS accredited laboratory of i2 Analytical. The chemical laboratory analysis results are presented in Appendix E.

The results have been screened against the verification criteria set out in Table 2.1 which are based on screening values for a Commercial end use scenario. None of the recorded concentrations exceed their adopted verification criteria values.

5 Conclusions and Recommendations

5.1 Conclusions

The deployed mitigation measures are in accordance with those specified within the RMS document.

Evidence has been provided that indicates that a barrier pipe system has been used for the new drinking water pipes on site. Evidence has also been provided for the installation of a gas membrane.

The concrete used within the construction of the new store is in accordance with the requirements of a DS-3 and AC-3 concrete classification.

The imported capping material placed within the soft landscaping areas is of sufficient thickness and the chemical composition meets the specified verification criteria within the RMS across the majority of areas. The geotextile specified within the RMS is also in place at an appropriate depth. Where the imported capping is below the specified thickness (HP105), ducting is present, which is likely to limit the exposure risk to human health.

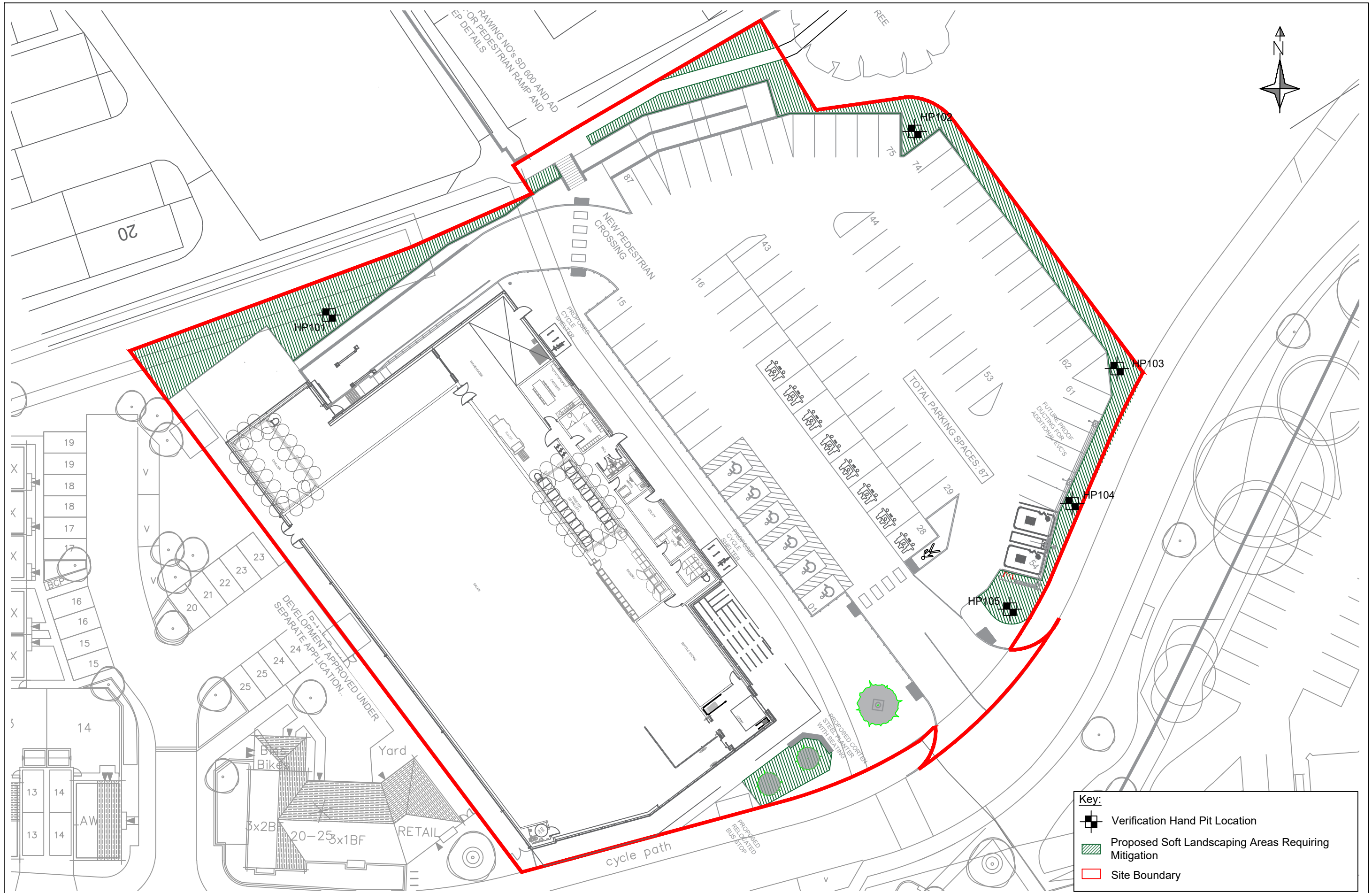
5.2 Recommendations

This report should be submitted to the local authority for comment and approval.

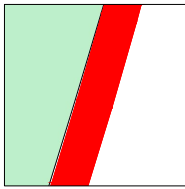


Drawings

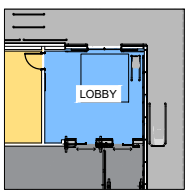




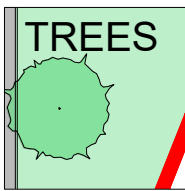
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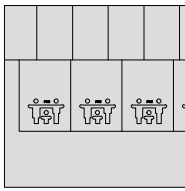
APPLICATION SITE BOUNDARY LIDL



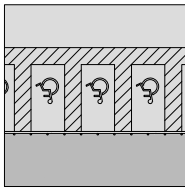
PROPOSED ENTRANCE LOBBY



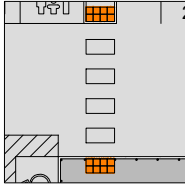
PROPOSED LANDSCAPING AREAS
REFER TO DRAWING NO. 19020
AD 115 PROPOSED SITE FINISHES



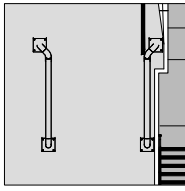
PARENT AND CHILD PARKING



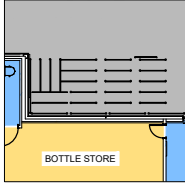
DISABLED PARKING



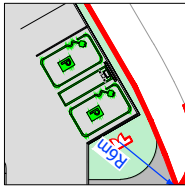
ZEBRA CROSSING WITH
TACTILE PAVING



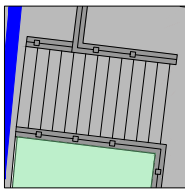
HGV WHEEL GUIDES



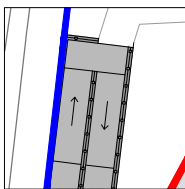
TROLLEY BAY



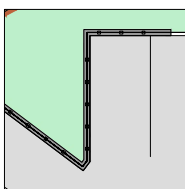
PROPOSED EVC BAYS WITH
FEEDER PILLAR



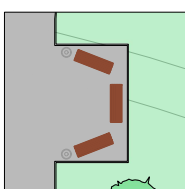
PROPOSED EXTERNAL STAIRS
(SUBJECT TO SEPARATE
APPLICATION)



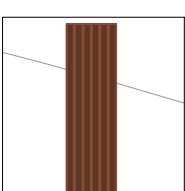
PROPOSED EXTERNAL RAMP AREA
(SUBJECT TO SEPARATE
APPLICATION)



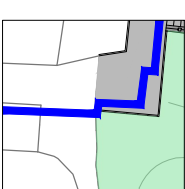
PROPOSED RETAINING WALLS



SEATING AREA



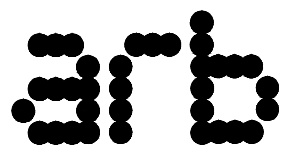
PROPOSED SEATS



OUTLINE APPLICATION SITE
BOUNDARY - BLUE LINE

0 5m 10m
SCALE 1:200 @ A1

RIBA
Chartered Practice



Architects
Registration
Board



DIMENSIONS TO BE CONFIRMED ON SITE PRIOR TO START OF WORKS AND ODA TO BE INFORMED OF DISCREPANCIES IMMEDIATELY. NO DIMENSIONS TO BE SCALED FROM THIS DRAWING.
ALL MATERIALS AND WORKS ARE TO BE CARRIED OUT IN ACCORDANCE WITH THE LATEST REVISION OF THE APPROPRIATE BRITISH STANDARDS OR EURO CODE. PLANNING APPROVAL, CURRENT BUILDING REGULATIONS AND CODES OF PRACTICE.
PARTY WALL ACT - NOTICES UNDER THE PARTY WALL ACT ARE TO BE SERVED BY THE PROPERTY OWNER OR APPOINTED THIRD PARTY BY PROPERTY OWNER. HEALTH AND SAFETY - CDW 2015 REGULATIONS APPLY TO ALL CONSTRUCTION WORKS TO BE CARRIED OUT AND APPLY TO DESIGNERS, CONTRACTORS AND THE CLIENT, AS SUCH ALL PARTIES HAVE DUTIES UNDER THESE REGULATIONS.

OAK TREE

SEE SE DRAWING NO."SD 600 D"
FOR PEDESTRIAN RAMP AND STEP
DETAIL, TO BE DEALT WITH UNDER
SEPARATE PLANNING APPLICATION

NEW PEDESTRIAN
CROSSING

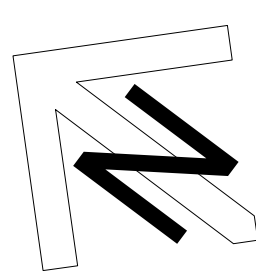
TOTAL PARKING SPACES: 87

SEATING
AREA

2no. FASTIGIATE
TREES

PROPOSED
BUS STOP
RELOCATION

DEVELOPMENT APPROVED UNDER
SEPARATE APPLICATION..



A DRAWING AMENDED TO SUIT CLIENTS REQUEST 06.05.22 NUTE LMC
Rev Description Date Rev by Chk by

Revisions

Client
LIDL GREAT BRITAIN LTD.
SOUTHAMPTON, SO16 0AW.
Project
HOLLOW LANE, SHINFIELD

Drawing
PROPOSED SITE PLAN

Project No:
19020

Drawing No:
AD_110

Purpose of Issue
PLANNING

Scale @ A1
1:200

Drawn
EH

Checked
LMC

Revision
A

Date
APR 2022

SCHEDULE

Sales Area	1305 m ²
Warehouse GIA inc Freezer/Chiller	454 m ²
Ancillary GIA inc all Welfare & Bakery	242 m ²
Internal walls	37 m ²
GIA	2038 m ²
GEA	2137 m ²
Total Site Area Red (Approximate)	6676 m ²
Standard Parking Spaces	71 spaces
Disabled Parking Spaces	06 spaces
P&C Parking Spaces	08 spaces
EVC (Electric Vehicle Charging) Spaces	02 spaces
Total Parking Spaces	87 spaces



One Design Architects Ltd. Unit 1 Merchants Quay, Phase II, Ashley Lane,
Shipley, West Yorkshire, BD17 7DB
Tel: 01274 591188
www.onedesignarchitects.com mail@onedesignarchitects.com
Registered in England & Wales No: 8355643

Architectural

DO NOT USE FOR CONSTRUCTION

Appendix A

**Client Provided Barrier Pipe Information
and Verification Photographs**



Delivery Note



Invoice To Customer: TIN002
Tinnelly Construction Limited
10 Newtown Road
Rostrevor
Newry
Northern Ireland
BT34 3BY
United Kingdom

Deliver to:
Tinnelly Construction Limited
Beke Avenue
Shinfield
RG2 9EH
United Kingdom

Site Information:
Noel
07425 623 409
What 3 Words: give/bench/nets
*Have to access Beke Avenue from the
Arborfield Road end*

Del Note Number	Ord Number	Date	Linked PO Number	Your Order Ref	Delivery Method	Taken By	Page
SO0132812/1	SO0132812	21/08/2024		31516	Delivery	Alton Counter	1/1

Item Code	Description	Quantity Delivered	Quantity Ordered	Quantity Outstanding	Unit
DISCC	Discount	1	1	0	None
63TWBL	63mm OD Twinwall Duct x50m; BLACK	1	1	0	Each
110TWBL	110mm OD Twinwall Electrical Duct x50m; BLACK	2	2	0	Each
32SLA50	SLA Barrier Pipe: 32mm x 50m Coil; Type A SDR11	1	1	0	Each
32SLAC	32mm SLA Pipe Coupler; Type A	1	1	0	Each
32SLAE90	32mm SLA Pipe Elbow 90deg; Type A	1	1	0	Each
32PROEC	32mm Barrier Pipe End Plug; Type A (Fits both Protecta-Line & SLA)	1	1	0	Each

What 3 Words: give/bench/nets

Company: *Tinnelly* *cop*

Non Delivery or discrepancies must be notified within 3 days of receipt of invoice otherwise claims cannot be accepted.

Accepted By:

Subject to Terms and Conditions. Copies available on request

Drivers Signature:

Print Name:

The company cannot be held responsible for any damage to private property by our vehicles when delivering goods off the public road to customer's instructions.

Print Name: *NICK*

Date: *21/8/2024*

Covers	Bags	Boxes	Pipes	Coils	Pallets	Loose
	1			4		

VAT Reg. 101162384

E. & O. E.

Company Reg No. 07133601



Appendix B

**Verification Completion Report for
Ground Gas Protection Systems**





GeoEnginSeer

FREELANCE DILETTANTE GEOLOGIST

Lidl,
Hollow Lane,
Shinfield, Reading

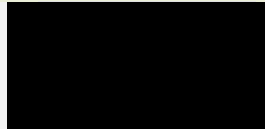
Verification Completion Report for Ground Gas Protection Systems

Date / Time:	23.04.24
--------------	----------

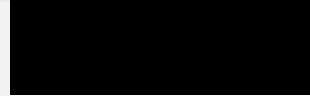
Project Title	Lidl Reading
GES Report Number	1605
Date	23.04.24
Client	Tinnelly Construction Ltd.
Weather	15°C sunny, light wind
Development Type	Commercial
Foundation Type	Reinforced Monolithic Concrete Slab and Beam
Plot Numbers	One New Commercial Structure
GES Job Ref:	1599
Visit By	Bill Lawler

Report By**Checked/Approved By**

Signature



Signature



Name: Mairead Morony

Name: Ben Crowther

Company Contact Details

Tinnelly Construction Ltd.,
 10 Newtown Rd,
 Rostrevor,
 Newry,
 BT34 3BY

1. GAS MEMBRANE

1.1 Condition Of Subgrade and Underside Of Gas Membrane

Check that the subgrade does not contain rough/uneven surfaces, is appropriately clean and that there are no hard/sharp objects. That protective sand blinding or geotextile (if specified) is present and meets the design criteria.

Subgrade appeared to have been cleaned, no debris or sharp objects were protruding into membrane.

1.2 Gas Membrane Type

Manufacturer and product specification, gauge, colour, brand/name, material batch/roll numbers.

Solshield Ultra Gas Barrier

1.3 Laps, Welds and Joint Seals

Joints lapped and sealed in accordance with manufacturers requirements/specification. Minimum overlap insured? Welds complete? Appropriate joining/double sided tape used?

Joints were a combination of twin welds and hand welds.

1.4 Service Entries Seals

How many pipe penetrations? Top hats seal arrangements fixed around service entries? Use of jubilee clips? Etc.

The pipe penetrations were sealed with silver Detailing Strip in situ.

2. VENTILATION SYSTEMS

2.1 Subfloor Void

Is a check possible? Void former? Gravel (type/specification)? Height of void space? Is it clear?

25mm Cusped Ventilation Mat.

2.2 External Wall Airbricks

How many? Size? Positioning? Spacing? Etc.

Vent Mat Vents Placed every few metres.

2.3 Active Venting

Type of air supply: mechanical, natural, combined? Location/condition/number of fans/vents? Location and size of inlets? Provision of air cleaning devices and air heaters? Supply and exhaust duct work? Alarm provision/installation? Gas monitoring system in under-floor void?

NA – Although the building is planned to have a positive pressure system in it (to smell of bakeries) which will assist in the resistance of Gas Ingress

2.4 Testing Of Air Flow

Is the air flowing sufficiently through ventilation? Anemometer reading? Smoke test? Tracer gas?

No edge fittings available to test.

3. INSPECTION AND INTEGRITY DETAILS

On the 23rd of April 2024 the installation of the Proprietary Gas Resistant Membrane for the protection of properties from ground gas was inspected at Parts 1, 2 and 3 Lidl, Shinfield, Reading.

Solshield Ultra Gas Barrier had been installed on the plot bases and silver Detailing Strip was used to detail corners and pipes.

The corner details were largely neat and well sealed with returns and overlaps more than 150mm. I measured and pick tested all corners.

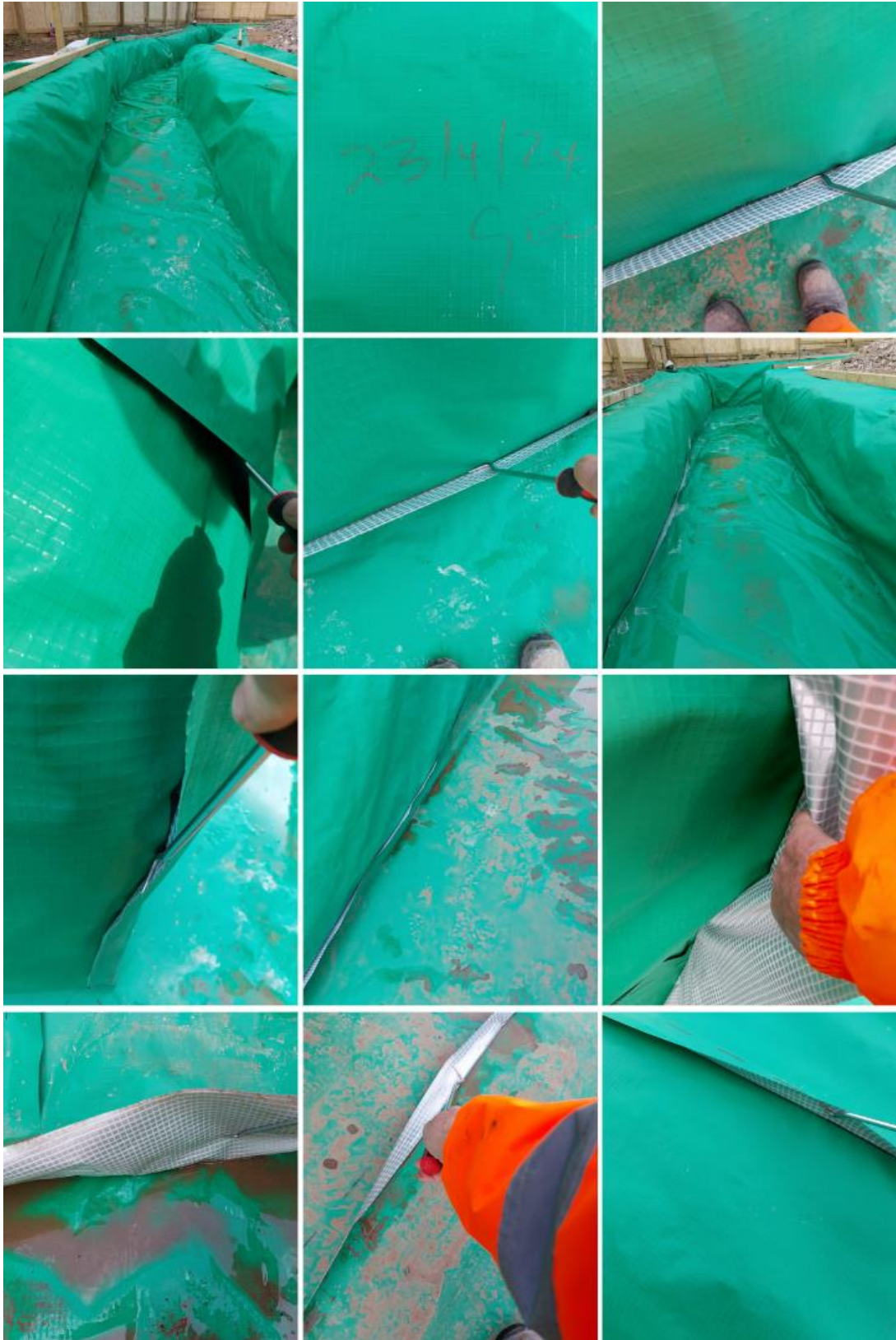
The pipe penetrations / service entries were sealed in situ with silver Detailing Strip. Most of which were neat and well-sealed. I pick tested all pipe penetrations.

The gas membrane joins were fixed together with a combination of heat gun sealed double sided jointing tape and welded self-adhesive material.

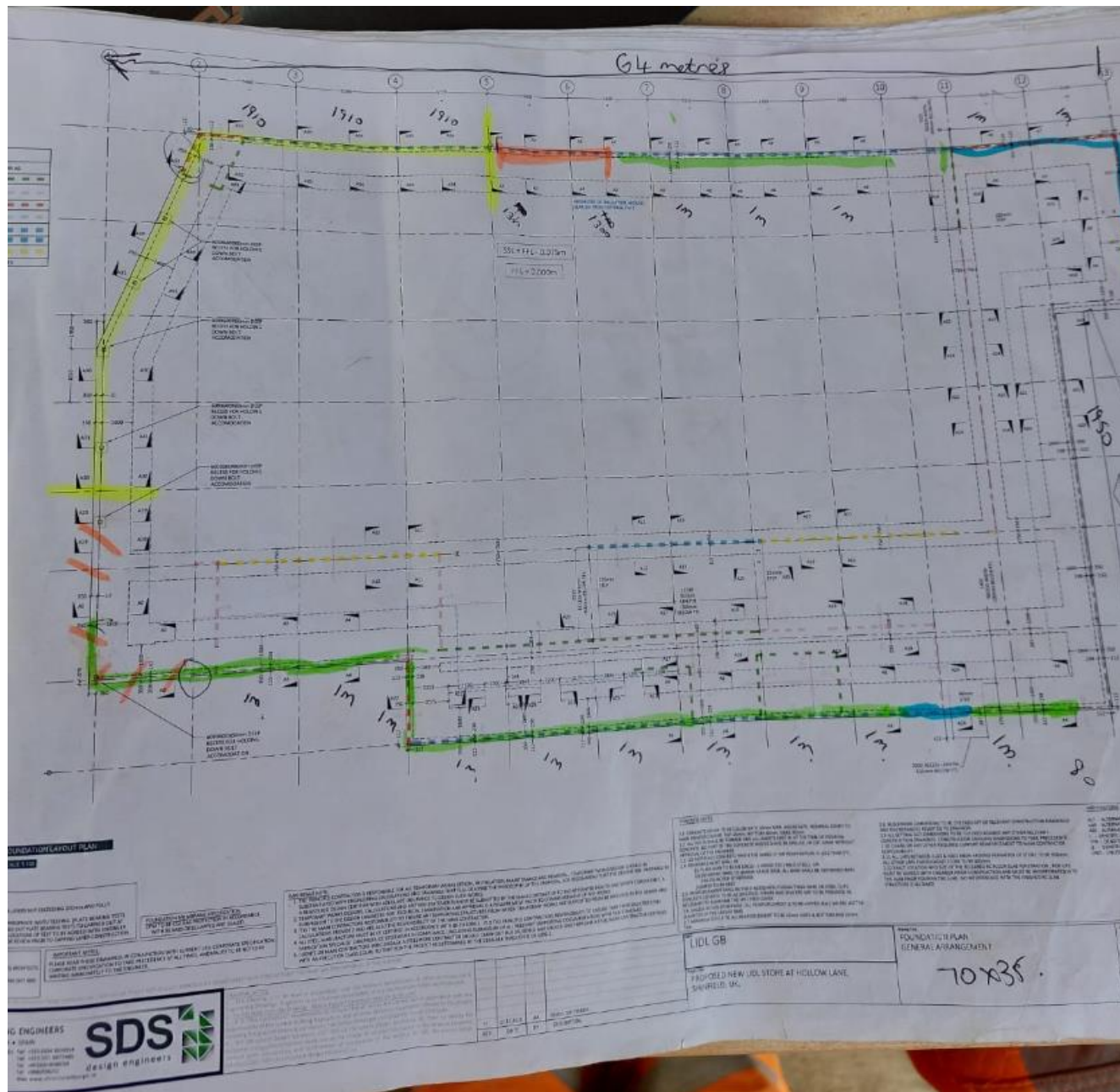
The condition of the membrane was good and had been installed to an exceptionally high standard, only a few minor repairs were necessary.

(Please see photos.)

4. PHOTOGRAPHIC RECORDS



Site Plan



5. CONCLUSION OF SITE VISIT

5.1 Details Of Installers

Are the installers suitably qualified / trained? Names of installers / company details?

Tinnelly Construction Ltd.

5.2 Pass / Fail?

Are the measures inspected acceptable / NOT acceptable? Do they comply with the specifications? Is attention required to specific issues?

PASS

5.3 Additional notes

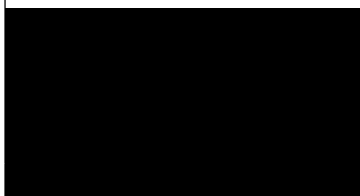
Remedial actions to be taken? Re-visit to be arranged?

N/A.

Visual inspection has been completed by specialist sub-contractor Bill Lawler of GeoEnginSeer Ltd on behalf of Tinnelly Construction Ltd with the inspection completed concurrently with integrity testing.

These buildings have **PASSED** inspection.

An additional inspection IS NOT required for these plots. However, proof of sealing the service conduit gap between services (water/gas/electric) outer face and the edge of the service conduit is requested.



BGA British
Geomembrane
Association



Inspection by: H.B. Crowther

Signed: Ben Crowther: 23.04.24

6.0 Limitations and Challenges of Verification Reporting

This report is based on the information that has been made available to us from the client, contractor and architect regarding the site. The conclusions drawn in the report are considered correct although any subsequent additional information or actions may allow refinement of the conclusions. It should be noted that: The report has been prepared under the express instructions and solely for the use of the Client.

The findings of this report represent the professional opinion of experienced Ground Gas System Surveyors. GeoEnginSeer Ltd does not provide legal advice and the advice of lawyers may also be required.

All work carried out in preparing this report has utilised and is based upon understanding of current relevant UK standards and codes, technology, and legislation. (BS8485:2015+A1:2019 & CIRIA 735).

Changes in this legislation and guidance may occur at any time in the future and cause any conclusions to become inappropriate or incorrect.

The report is limited to the boundaries identified by the Client on this site and confirmed within this document.

Should additional services be introduced, or service conduits are not sealed or have services provided through them at a later date that are not sealed to the conduit and or gas protection system, a retrospective fit may be required. If a site is left open for prolonged periods following verification or works are conducted that may damage the integrity of the installation by follow on trades repairs may be needed, the standards observed in a positive verification report may be compromised. Intellectual rights to this document may be rescinded.

Appendix C

Concrete Classification Data



Project Lidl Shinfield				Job no. 24082	
Calcs for Foundation Concrete Specification				Start page no./Revision 1	
Calcs by JPM	Calcs date 26/11/2024	Checked by CD	Checked date 26/11/2024	Approved by	Approved date

CONCRETE SPECIFICATION

In accordance with BS8500-1:2015 + A2:2019 incorporating corrigenda No.1 and No.2

Tedds calculation version 1.1.01

Element definition

Element description	Foundation
Intended working life	At least 50 years
Type of concrete	Reinforced, normal weight
Maximum aggregate size	20 mm
Allowance for deviation between minimum and nominal covers	$\Delta C_{dev} = 5 \text{ mm}$
Allowance for deviation (XA class)	$\Delta C_{dev_s} = 5 \text{ mm}$

Exposure classes

Corrosion induced by carbonation (XC classes) - Table A.1

Class description	Dry or permanently wet
Class designation	XC1

Chemical attack (XA classes) - Table A.10

ACEC class	AC-3 (relatively serious consequences of failure)
Section width	$t = 300 \text{ mm}$
Hydraulic gradient (note B)	Less than or equal to 5
Design chemical class	DC-3(1 No. additional protective measures required) The APM may be any one of APM1 to APM5.

Concrete requirements and specification

Consistence class	S4
-------------------	----

Minimum allowable nominal covers

For exposure class XC1 - Table A.4	20 mm
For design chemical class DC-3 - Table A.10	30 mm
Specified nominal cover	30 mm

PASS - The specified nominal cover is adequate

Minimum strength class with 30 mm cover

For exposure class XC1 - Table A.4	C20/25
For design chemical class DC-3 - Table A.12	C25/30
Specified strength class	C25/30

PASS - The specified strength class is adequate

Maximum water/cement ratio with 30 mm cover, 20 mm aggregate and C25/30 concrete

For exposure class XC1 - Table A.4	0.70
For design chemical class DC-3 - Table A.12	0.50
Specified maximum water/cement ratio	0.40

PASS - The specified maximum water cement ratio is acceptable

Minimum cement content with 30 mm cover and C25/30 concrete

For exposure class XC1 - Table A.4	240 kg/m ³
For design chemical class DC-3 - Table A.12	380 kg/m ³
For water/cement ratio of 0.40 - Table A.7	380 kg/m ³
Specified minimum cement content	380 kg/m ³

PASS - The specified minimum cement content is adequate

Project Lidl Shinfield				Job no. 24082	
Calcs for Foundation Concrete Specification				Start page no./Revision 2	
Calcs by JPM	Calcs date 26/11/2024	Checked by CD	Checked date 26/11/2024	Approved by	Approved date

Recommended cements/combinations with 30 mm cover and C25/30 concrete

For exposure class XC1 - Table A.4

All in Table A.6

For design chemical class DC-3 - Table A.12

CEM I-SR0, CEM I-SR3, IIB-P+SR, IIB-Q+SR, IIB-V+SR, IIIA+SR

Recommended cement/combinations types

CEM I-SR0, CEM I-SR3, IIB-P + SR, IIB-Q + SR, IIB-V + SR, IIIA + SR

Specified cement/combination designation

IIIA + SR

PASS - The specified cement/combination is adequate

Project Lidl Shinfield				Job no. 24082	
Calcs for Foundation Concrete Specification				Start page no./Revision 3	
Calcs by JPM	Calcs date 26/11/2024	Checked by CD	Checked date 26/11/2024	Approved by	Approved date

Designed concrete specification for Foundation with 30 mm cover

The concrete shall be produced in accordance with BS8500-2.

Compressive strength class	C25/30
Maximum water/cement ratio	0.40
Minimum cement/combination content	380 kg/m ³
Cement and combination designation	IIIA + SR
Maximum aggregate size	20 mm
Chloride content class	Cl 0, 40
Consistence class	S4

Compressive Strength and Hardened Density of Cube Specimens

In Accordance with BS EN 12390-3:2019 And BS EN 12390-7:2019

REPORT NUMBER: C4002778 / 13374.3.1.17
CLIENT: Tinnelly Construction
ADDRESS: 10 Newtown Road, Rostrevor, Co Down, BT34 3BY, BT34 3BY
CONTRACT: Beke Avenue, Shinfield, Reading, RG2 9EH
CONTRACT ADDRESS: Beke Avenue, Shinfield, Reading, RG2 9EH
SAMPLED BY: Unknown
SAMPLING PLAN: Simtec procedure
METHOD OF SAMPLING: Composite - BS EN 12350-1
ENVIRONMENTAL CONDITIONS: Overcast
CONDITION ON RECEIPT: Acceptable
MIX DESIGNATION: C25-c30
CAST BY:
SAMPLING LOCATION: Little Shinfield
SPECIFIED CHARACTERISTIC STRENGTH: 0N/mm² at 0 Days
SUPPLIER: Gloucestershire concrete, Reading field
DATE SAMPLED / TIME CAST: 28/05/2024 09:28
DATE RECEIVED: 29/05/2024
DESIGNATED CUBE DIMENSION: 100mm
TYPE OF CUBE: Concrete Cube
METHOD OF COMPACTION: Tamping bar typically 25 blows per layer
INITIAL CURING METHOD: Covered with damp hessian & plastic @ 18 - 22°C
METHOD OF CURING AFTER DE-MOULDING: Water cured in tanks maintained @ 18-22°C
DELIVERY TICKET: Na
TESTED BY: CN, LH

RESULT Test Location: Simtec East Goscote

Cube Reference	Client Reference	Date of Test	Age at Test (Days)	Condition at test	Mass of Specimen (g)	Specimen Dimensions			Specimen Density (kg/m ³)	Maximum Load (kN)	Compressive Strength (N/mm ²)	Mode of Failure	Remarks
						Height (mm)	Width (mm)	Depth (mm)					
B26350.1	13374.2.1.3/1	04/06/2024	7	Saturated	2332.2	100.0	100.0	100.0	2320	198.2	19.8	Normal (S)	1,7,17
B26350.2	13374.2.1.3/2	25/06/2024	28	Saturated	2352.9	100.0	100.0	100.0	2310	268.6	26.9	Normal (S)	1,7,17
B26350.3	13374.2.1.3/3	23/07/2024	56			100.0	100.0	100.0					

Volume for density determined by checked, designated size. Measured size used only if outside check tolerances.

Remarks:

Test results reported relate only to the items tested.
This report shall not be reproduced except in full without approval of the Laboratory.
Opinions and interpretations expressed herein are outside the scope of UKAS Accreditation. The laboratory does not apply a conformity statement to test reports as standard, unless specifically requested by the customer.
Amended report. This test report supersedes test report version 1 - Additional sample results added to report
Report Format: Cube/TP27/Rep Issue 1 Rev 3 07/22

116 The Burrows,
East Goscote,
Leicester LE7 3XD

0116 319 6100
info@simtec-mt.co.uk
www.simtec-mt.co.uk

For and on behalf of Simtec
Robert McGoff - Laboratory Supervisor



Approved Signatory
Report date 25-Jun-24



10108

Compressive Strength and Hardened Density of Cube Specimens

In Accordance with BS EN 12390-3:2019 And BS EN 12390-7:2019

REPORT NUMBER: C4002778 / 13374.3.1.17

Remarks

1. Appropriate documentation has been received stating the cubes tested from the above batch have been manufactured in calibrated moulds in accordance with the requirements of BS EN 12390-2:2019.
2. Appropriate documentation has NOT been received stating the cubes tested from the above batch have been manufactured in calibrated moulds in accordance with the requirements of BS EN 12390-2:2019 and so require additional checks for compliance as per BS EN 12390-1: 2021 prior to test.
3. These test results relate to cubes which DO NOT meet the dimensional requirements of BS EN 12390-1 but comply with the requirements of BS EN 12390-3:2019 Annex B.
4. These test results relate to cubes which DO NOT meet the dimensional requirements of BS EN 12390-1 or BS EN 12390-3:2019 Annex B.
5. These test results relate to cubes which DO NOT meet the dimensional requirements and/or shape requirements of BS EN 12390-1.
6. These test results relate to cubes which DO NOT meet the dimensional and/or shape requirements of BS EN 12390-1 and BS EN 12390-3:2019 Annex B.
7. Dimensions comply with the requirements of BS EN 12390-1:2021.
8. Dimensions DO NOT comply with the requirements of BS EN 12390-1:2021 but do comply with the requirements of BS EN 12390-3:2019 Annex B.
9. Dimensions DO NOT comply with the requirements of BS EN 12390-1:2021 or BS EN 12390-3:2019 Annex B.
10. The test cube FAILS TO COMPLY with the requirements of BS EN 12390 and has been REJECTED for compressive strength testing in accordance with BS EN 12390-3:2019.
11. The test cube, stored in water at 20°C ±2°C, has been tested for compressive strength and density, AT CLIENT'S INSTRUCTION.
12. Flatness checks comply with the requirements of BS EN 12390-1:2021.
13. Perpendicularity checks comply with the requirements of BS EN 12390-1:2021.
14. Measured dimensions FAIL TO COMPLY with the requirements of BS EN 12390-1:2021.
15. Flatness checks on loading surfaces FAIL TO COMPLY with the requirements of BS EN 12390-1:2021.
16. Perpendicularity checks FAIL TO COMPLY with the requirements of BS EN 12390-1:2021.
17. Tested for compressive strength in accordance with BS EN 12390-3:2019 and density in accordance with BS EN 12390-7:2019
18. Tested for compressive strength in accordance with BS EN 12390-3:2019 Annex B and density in accordance with BS EN 12390-7:2019
19. Curing tank temperatures are outside the tolerances required to BS EN 12390-2
20. Nonconforming Test - Not covered by UKAS Accreditation

Remarks:

Test results reported relate only to the items tested.

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Opinions and interpretations expressed herein are outside the scope of UKAS

Accreditation. The laboratory does not apply a conformity statement to test reports as standard, unless specifically requested by the customer.

Amended report. This test report supersedes test report version 1 - Additional sample results added to report

Report Format: Cube/TP27/Rep Issue 1 Rev 3 07/22

116 The Burrows,
East Goscote,
Leicester LE7 3XD0116 319 6100
info@simtec-mt.co.uk
www.simtec-mt.co.uk
END OF REPORT

Compressive Strength and Hardened Density of Cube Specimens

In Accordance with BS EN 12390-3:2019 And BS EN 12390-7:2019

REPORT NUMBER:	C4002778 / 13374.3.1.14	SAMPLING LOCATION:	Little Shinfield
CLIENT:	Tinnelly Construction	SPECIFIED CHARACTERISTIC STRENGTH:	0N/mm ² at 0 Days
ADDRESS:	10 Newtown Road, Rostrevor, Co Down, BT34 3BY, BT34 3BY	SUPPLIER:	Berkshire concrete , Reading field
CONTRACT:	Beke Avenue, Shinfield, Reading, RG2 9EH	DATE SAMPLED / TIME CAST:	28/05/2024 07:40
CONTRACT ADDRESS:	Beke Avenue , Shinfield , Reading, RG2 9EH	DATE RECEIVED:	29/05/2024
SAMPLED BY:	Chris Hallam	DESIGNATED CUBE DIMENSION:	100mm
SAMPLING PLAN:	Simtec procedure	TYPE OF CUBE:	Concrete Cube
METHOD OF SAMPLING:	Composite - BS EN 12350-1	METHOD OF COMPACTION:	Tamping bar typically 25 blows per layer
ENVIRONMENTAL CONDITIONS:	Raining	INITIAL CURING METHOD:	Covered with damp hessian & plastic @ 18 - 22°C
CONDITION ON RECEIPT:	Acceptable	METHOD OF CURING AFTER DE-MOULDING:	Water cured in tanks maintained @ 18-22°C
MIX DESIGNATION:	C25-c30	DELIVERY TICKET:	Na
CAST BY:	Simtec - Chris Hallam	TESTED BY:	CN, LH

RESULT Test Location: Simtec East Goscote

Cube Reference	Client Reference	Date of Test	Age at Test (Days)	Condition at test	Mass of Specimen (g)	Specimen Dimensions			Specimen Density (kg/m ³)	Maximum Load (kN)	Compressive Strength (N/mm ²)	Mode of Failure	Remarks
						Height (mm)	Width (mm)	Depth (mm)					
B26332.1	13374.2.1.1/1	04/06/2024	7	Saturated	2314.2	100.0	100.0	100.0	2290	224.5	22.5	Normal (S)	1,7,17
B26332.2	13374.2.1.1/2	25/06/2024	28	Saturated	2298.4	100.0	100.0	100.0	2290	300.5	30.1	Normal (S)	1,7,17
B26332.3	13374.2.1.1/3	23/07/2024	56			100.0	100.0	100.0					

Volume for density determined by checked, designated size. Measured size used only if outside check tolerances.

Remarks:

Test results reported relate only to the items tested.
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Amended report. This test report supersedes test report version 1 - Additional sample results added to report
Report Format: Cube/TP27/Rep Issue 1 Rev 3 07/22

116 The Burrows,
East Goscote,
Leicester LE7 3XD

0116 319 6100
info@simtec-mt.co.uk
www.simtec-mt.co.uk

For and on behalf of Simtec
Robert McGoff - Laboratory Supervisor

Approved Signatory
Report date 25-Jun-24



10108

Compressive Strength and Hardened Density of Cube Specimens

In Accordance with BS EN 12390-3:2019 And BS EN 12390-7:2019

REPORT NUMBER: C4002778 / 13374.3.1.14

Remarks

1. Appropriate documentation has been received stating the cubes tested from the above batch have been manufactured in calibrated moulds in accordance with the requirements of BS EN 12390-2:2019.
2. Appropriate documentation has NOT been received stating the cubes tested from the above batch have been manufactured in calibrated moulds in accordance with the requirements of BS EN 12390-2:2019 and so require additional checks for compliance as per BS EN 12390-1: 2021 prior to test.
3. These test results relate to cubes which DO NOT meet the dimensional requirements of BS EN 12390-1 but comply with the requirements of BS EN 12390-3:2019 Annex B.
4. These test results relate to cubes which DO NOT meet the dimensional requirements of BS EN 12390-1 or BS EN 12390-3:2019 Annex B.
5. These test results relate to cubes which DO NOT meet the dimensional requirements and/or shape requirements of BS EN 12390-1.
6. These test results relate to cubes which DO NOT meet the dimensional and/or shape requirements of BS EN 12390-1 and BS EN 12390-3:2019 Annex B.
7. Dimensions comply with the requirements of BS EN 12390-1:2021.
8. Dimensions DO NOT comply with the requirements of BS EN 12390-1:2021 but do comply with the requirements of BS EN 12390-3:2019 Annex B.
9. Dimensions DO NOT comply with the requirements of BS EN 12390-1:2021 or BS EN 12390-3:2019 Annex B.
10. The test cube FAILS TO COMPLY with the requirements of BS EN 12390 and has been REJECTED for compressive strength testing in accordance with BS EN 12390-3:2019.
11. The test cube, stored in water at 20°C ±2°C, has been tested for compressive strength and density, AT CLIENT'S INSTRUCTION.
12. Flatness checks comply with the requirements of BS EN 12390-1:2021.
13. Perpendicularity checks comply with the requirements of BS EN 12390-1:2021.
14. Measured dimensions FAIL TO COMPLY with the requirements of BS EN 12390-1:2021.
15. Flatness checks on loading surfaces FAIL TO COMPLY with the requirements of BS EN 12390-1:2021.
16. Perpendicularity checks FAIL TO COMPLY with the requirements of BS EN 12390-1:2021.
17. Tested for compressive strength in accordance with BS EN 12390-3:2019 and density in accordance with BS EN 12390-7:2019
18. Tested for compressive strength in accordance with BS EN 12390-3:2019 Annex B and density in accordance with BS EN 12390-7:2019
19. Curing tank temperatures are outside the tolerances required to BS EN 12390-2
20. Nonconforming Test - Not covered by UKAS Accreditation

Remarks:

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Accreditation. The laboratory does not apply a conformity statement to test reports as standard, unless specifically requested by the customer.

Amended report. This test report supersedes test report version 1 - Additional sample results added to report

Report Format: Cube/TP27/Rep Issue 1 Rev 3 07/22

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END OF REPORT

Compressive Strength and Hardened Density of Cube Specimens

In Accordance with BS EN 12390-3:2019 And BS EN 12390-7:2019

REPORT NUMBER: C4002778 / 13374.3.1.11
CLIENT: Tinnelly Construction
ADDRESS: 10 Newtown Road, Rostrevor, Co Down, BT34 3BY, BT34 3BY
CONTRACT: Beke Avenue, Shinfield, Reading, RG2 9EH
CONTRACT ADDRESS: Beke Avenue, Shinfield, Reading, RG2 9EH
SAMPLED BY: Chris Hallam
SAMPLING PLAN: Simtec procedure
METHOD OF SAMPLING: Composite - BS EN 12350-1
ENVIRONMENTAL CONDITIONS: Overcast
CONDITION ON RECEIPT: Acceptable
MIX DESIGNATION: C25-c30
CAST BY: Simtec - Chris Hallam
SAMPLING LOCATION: Little Shinfield
SPECIFIED CHARACTERISTIC STRENGTH: 0N/mm² at 0 Days
SUPPLIER: Gloucestershire concrete, Reading field
DATE SAMPLED / TIME CAST: 28/05/2024 16:22
DATE RECEIVED: 29/05/2024
DESIGNATED CUBE DIMENSION: 100mm
TYPE OF CUBE: Concrete Cube
METHOD OF COMPACTION: Tamping bar typically 25 blows per layer
INITIAL CURING METHOD: Covered with damp hessian & plastic @ 18 - 22°C
METHOD OF CURING AFTER DE-MOULDING: Water cured in tanks maintained @ 18-22°C
DELIVERY TICKET: Na
TESTED BY: CN, LH

RESULT Test Location: Simtec East Goscote

Cube Reference	Client Reference	Date of Test	Age at Test (Days)	Condition at test	Mass of Specimen (g)	Specimen Dimensions			Specimen Density (kg/m ³)	Maximum Load (kN)	Compressive Strength (N/mm ²)	Mode of Failure	Remarks
						Height (mm)	Width (mm)	Depth (mm)					
B26460.1	13374.2.1.10/1	04/06/2024	7	Saturated	2323.4	100.0	100.0	100.0	2320	256.9	25.7	Normal (S)	1,7,17
B26460.2	13374.2.1.10/2	25/06/2024	28	Saturated	2352.4	100.0	100.0	100.0	2340	358.1	35.8	Normal (S)	1,7,17
B26460.3	13374.2.1.10/3	23/07/2024	56			100.0	100.0	100.0					

Volume for density determined by checked, designated size. Measured size used only if outside check tolerances.

Remarks:

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Amended report. This test report supersedes test report version 1 - Additional sample results added to report
Report Format: Cube/TP27/Rep Issue 1 Rev 3 07/22

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For and on behalf of Simtec
Robert McGoff - Laboratory Supervisor



Approved Signatory
Report date 25-Jun-24



10108

Compressive Strength and Hardened Density of Cube Specimens

In Accordance with BS EN 12390-3:2019 And BS EN 12390-7:2019

REPORT NUMBER: C4002778 / 13374.3.1.11

Remarks

1. Appropriate documentation has been received stating the cubes tested from the above batch have been manufactured in calibrated moulds in accordance with the requirements of BS EN 12390-2:2019.
2. Appropriate documentation has NOT been received stating the cubes tested from the above batch have been manufactured in calibrated moulds in accordance with the requirements of BS EN 12390-2:2019 and so require additional checks for compliance as per BS EN 12390-1: 2021 prior to test.
3. These test results relate to cubes which DO NOT meet the dimensional requirements of BS EN 12390-1 but comply with the requirements of BS EN 12390-3:2019 Annex B.
4. These test results relate to cubes which DO NOT meet the dimensional requirements of BS EN 12390-1 or BS EN 12390-3:2019 Annex B.
5. These test results relate to cubes which DO NOT meet the dimensional requirements and/or shape requirements of BS EN 12390-1.
6. These test results relate to cubes which DO NOT meet the dimensional and/or shape requirements of BS EN 12390-1 and BS EN 12390-3:2019 Annex B.
7. Dimensions comply with the requirements of BS EN 12390-1:2021.
8. Dimensions DO NOT comply with the requirements of BS EN 12390-1:2021 but do comply with the requirements of BS EN 12390-3:2019 Annex B.
9. Dimensions DO NOT comply with the requirements of BS EN 12390-1:2021 or BS EN 12390-3:2019 Annex B.
10. The test cube FAILS TO COMPLY with the requirements of BS EN 12390 and has been REJECTED for compressive strength testing in accordance with BS EN 12390-3:2019.
11. The test cube, stored in water at 20°C ±2°C, has been tested for compressive strength and density, AT CLIENT'S INSTRUCTION.
12. Flatness checks comply with the requirements of BS EN 12390-1:2021.
13. Perpendicularity checks comply with the requirements of BS EN 12390-1:2021.
14. Measured dimensions FAIL TO COMPLY with the requirements of BS EN 12390-1:2021.
15. Flatness checks on loading surfaces FAIL TO COMPLY with the requirements of BS EN 12390-1:2021.
16. Perpendicularity checks FAIL TO COMPLY with the requirements of BS EN 12390-1:2021.
17. Tested for compressive strength in accordance with BS EN 12390-3:2019 and density in accordance with BS EN 12390-7:2019
18. Tested for compressive strength in accordance with BS EN 12390-3:2019 Annex B and density in accordance with BS EN 12390-7:2019
19. Curing tank temperatures are outside the tolerances required to BS EN 12390-2
20. Nonconforming Test - Not covered by UKAS Accreditation

Remarks:

Test results reported relate only to the items tested.

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Amended report. This test report supersedes test report version 1 - Additional sample results added to report

Report Format: Cube/TP27/Rep Issue 1 Rev 3 07/22

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END OF REPORT

Compressive Strength and Hardened Density of Cube Specimens

In Accordance with BS EN 12390-3:2019 And BS EN 12390-7:2019

REPORT NUMBER:	C4002778 / 13374.3.1.20		
CLIENT:	Tinnelly Construction	SAMPLING LOCATION:	Little Shinfield
ADDRESS:	10 Newtown Road, Rostrevor, Co Down, BT34 3BY, BT34 3BY	SPECIFIED CHARACTERISTIC STRENGTH:	0N/mm ² at 0 Days
CONTRACT:	Beke Avenue, Shinfield, Reading, RG2 9EH	SUPPLIER:	Gloucestershire concrete , Reading field
CONTRACT ADDRESS:	Beke Avenue , Shinfield , Reading, RG2 9EH	DATE SAMPLED / TIME CAST:	28/05/2024 11:02
SAMPLED BY:	Chris Hallam	DATE RECEIVED:	29/05/2024
SAMPLING PLAN:	Simtec procedure	DESIGNATED CUBE DIMENSION:	100mm
METHOD OF SAMPLING:	Composite - BS EN 12350-1	TYPE OF CUBE:	Concrete Cube
ENVIRONMENTAL CONDITIONS:	Raining	METHOD OF COMPACTION:	Tamping bar typically 25 blows per layer
CONDITION ON RECEIPT:	Acceptable	INITIAL CURING METHOD:	Covered with damp hessian & plastic @ 18 - 22°C
		METHOD OF CURING AFTER DE-MOULDING:	Water cured in tanks maintained @ 18-22°C
MIX DESIGNATION:	C25-c30	DELIVERY TICKET:	Na
CAST BY:	Simtec - Chris Hallam	TESTED BY:	CN, LH

RESULT Test Location: Simtec East Goscote

Cube Reference	Client Reference	Date of Test	Age at Test (Days)	Condition at test	Mass of Specimen (g)	Specimen Dimensions			Specimen Density (kg/m ³)	Maximum Load (kN)	Compressive Strength (N/mm ²)	Mode of Failure	Remarks
						Height (mm)	Width (mm)	Depth (mm)					
B26424.1	13374.2.1.4/1	04/06/2024	7	Saturated	2347.3	100.0	100.0	100.0	2310	187.0	18.7	Normal (S)	1,7,17
B26424.2	13374.2.1.4/2	25/06/2024	28	Saturated	2367.5	100.0	100.0	100.0	2340	252.5	25.3	Normal (S)	1,7,17
B26424.3	13374.2.1.4/3	23/07/2024	56			100.0	100.0	100.0					

Volume for density determined by checked, designated size. Measured size used only if outside check tolerances.

Remarks:

Test results reported relate only to the items tested.
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Amended report. This test report supersedes test report version 1 - Additional sample results added to report
Report Format: Cube/TP27/Rep Issue 1 Rev 3 07/22

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For and on behalf of Simtec
Robert McGoff - Laboratory Supervisor



Approved Signatory
Report date 25-Jun-24



10108

Compressive Strength and Hardened Density of Cube Specimens

In Accordance with BS EN 12390-3:2019 And BS EN 12390-7:2019

REPORT NUMBER: C4002778 / 13374.3.1.20

Remarks

1. Appropriate documentation has been received stating the cubes tested from the above batch have been manufactured in calibrated moulds in accordance with the requirements of BS EN 12390-2:2019.
2. Appropriate documentation has NOT been received stating the cubes tested from the above batch have been manufactured in calibrated moulds in accordance with the requirements of BS EN 12390-2:2019 and so require additional checks for compliance as per BS EN 12390-1: 2021 prior to test.
3. These test results relate to cubes which DO NOT meet the dimensional requirements of BS EN 12390-1 but comply with the requirements of BS EN 12390-3:2019 Annex B.
4. These test results relate to cubes which DO NOT meet the dimensional requirements of BS EN 12390-1 or BS EN 12390-3:2019 Annex B.
5. These test results relate to cubes which DO NOT meet the dimensional requirements and/or shape requirements of BS EN 12390-1.
6. These test results relate to cubes which DO NOT meet the dimensional and/or shape requirements of BS EN 12390-1 and BS EN 12390-3:2019 Annex B.
7. Dimensions comply with the requirements of BS EN 12390-1:2021.
8. Dimensions DO NOT comply with the requirements of BS EN 12390-1:2021 but do comply with the requirements of BS EN 12390-3:2019 Annex B.
9. Dimensions DO NOT comply with the requirements of BS EN 12390-1:2021 or BS EN 12390-3:2019 Annex B.
10. The test cube FAILS TO COMPLY with the requirements of BS EN 12390 and has been REJECTED for compressive strength testing in accordance with BS EN 12390-3:2019.
11. The test cube, stored in water at 20°C ±2°C, has been tested for compressive strength and density, AT CLIENT'S INSTRUCTION.
12. Flatness checks comply with the requirements of BS EN 12390-1:2021.
13. Perpendicularity checks comply with the requirements of BS EN 12390-1:2021.
14. Measured dimensions FAIL TO COMPLY with the requirements of BS EN 12390-1:2021.
15. Flatness checks on loading surfaces FAIL TO COMPLY with the requirements of BS EN 12390-1:2021.
16. Perpendicularity checks FAIL TO COMPLY with the requirements of BS EN 12390-1:2021.
17. Tested for compressive strength in accordance with BS EN 12390-3:2019 and density in accordance with BS EN 12390-7:2019
18. Tested for compressive strength in accordance with BS EN 12390-3:2019 Annex B and density in accordance with BS EN 12390-7:2019
19. Curing tank temperatures are outside the tolerances required to BS EN 12390-2
20. Nonconforming Test - Not covered by UKAS Accreditation

Remarks:

Test results reported relate only to the items tested.

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Amended report. This test report supersedes test report version 1 - Additional sample results added to report

Report Format: Cube/TP27/Rep Issue 1 Rev 3 07/22

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END OF REPORT

Compressive Strength and Hardened Density of Cube Specimens

In Accordance with BS EN 12390-3:2019 And BS EN 12390-7:2019

REPORT NUMBER: C4002778 / 13374.3.1.2
CLIENT: Tinnelly Construction
ADDRESS: 10 Newtown Road, Rostrevor, Co Down, BT34 3BY, BT34 3BY
CONTRACT: Beke Avenue, Shinfield, Reading, RG2 9EH
CONTRACT ADDRESS: Beke Avenue, Shinfield, Reading, RG2 9EH
SAMPLED BY: Chris Hallam
SAMPLING PLAN: Simtec procedure
METHOD OF SAMPLING: Composite - BS EN 12350-1
ENVIRONMENTAL CONDITIONS: Overcast
CONDITION ON RECEIPT: Acceptable
MIX DESIGNATION: C25-c30
CAST BY: Simtec - Chris Hallam
SAMPLING LOCATION: Little Shinfield
SPECIFIED CHARACTERISTIC STRENGTH: 0N/mm² at 0 Days
SUPPLIER: Gloucestershire concrete, Reading field
DATE SAMPLED / TIME CAST: 28/05/2024 17:01
DATE RECEIVED: 29/05/2024
DESIGNATED CUBE DIMENSION: 100mm
TYPE OF CUBE: Concrete Cube
METHOD OF COMPACTION: Tamping bar typically 25 blows per layer
INITIAL CURING METHOD: Covered with damp hessian & plastic @ 18 - 22°C
METHOD OF CURING AFTER DE-MOULDING: Water cured in tanks maintained @ 18-22°C
DELIVERY TICKET: Na
TESTED BY: CN, LH

RESULT Test Location: Simtec East Goscote

Cube Reference	Client Reference	Date of Test	Age at Test (Days)	Condition at test	Mass of Specimen (g)	Specimen Dimensions			Specimen Density (kg/m ³)	Maximum Load (kN)	Compressive Strength (N/mm ²)	Mode of Failure	Remarks
						Height (mm)	Width (mm)	Depth (mm)					
B26464.1	13374.2.1.11/1	04/06/2024	7	Saturated	2295.5	100.0	100.0	100.0	2320	220.5	22.1	Normal (S)	1,7,17
B26464.2	13374.2.1.11/2	25/06/2024	28	Saturated	2342.4	100.0	100.0	100.0	2350	289.8	29.0	Normal (S)	1,7,17
B26464.3	13374.2.1.11/3	23/07/2024	56			100.0	100.0	100.0					

Volume for density determined by checked, designated size. Measured size used only if outside check tolerances.

Remarks:

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Amended report. This test report supersedes test report version 1 - Additional sample results added to report
Report Format: Cube/TP27/Rep Issue 1 Rev 3 07/22

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For and on behalf of Simtec
Robert McGoff - Laboratory Supervisor



Approved Signatory
Report date 25-Jun-24



10108

Compressive Strength and Hardened Density of Cube Specimens

In Accordance with BS EN 12390-3:2019 And BS EN 12390-7:2019

REPORT NUMBER: C4002778 / 13374.3.1.2

Remarks

1. Appropriate documentation has been received stating the cubes tested from the above batch have been manufactured in calibrated moulds in accordance with the requirements of BS EN 12390-2:2019.
2. Appropriate documentation has NOT been received stating the cubes tested from the above batch have been manufactured in calibrated moulds in accordance with the requirements of BS EN 12390-2:2019 and so require additional checks for compliance as per BS EN 12390-1: 2021 prior to test.
3. These test results relate to cubes which DO NOT meet the dimensional requirements of BS EN 12390-1 but comply with the requirements of BS EN 12390-3:2019 Annex B.
4. These test results relate to cubes which DO NOT meet the dimensional requirements of BS EN 12390-1 or BS EN 12390-3:2019 Annex B.
5. These test results relate to cubes which DO NOT meet the dimensional requirements and/or shape requirements of BS EN 12390-1.
6. These test results relate to cubes which DO NOT meet the dimensional and/or shape requirements of BS EN 12390-1 and BS EN 12390-3:2019 Annex B.
7. Dimensions comply with the requirements of BS EN 12390-1:2021.
8. Dimensions DO NOT comply with the requirements of BS EN 12390-1:2021 but do comply with the requirements of BS EN 12390-3:2019 Annex B.
9. Dimensions DO NOT comply with the requirements of BS EN 12390-1:2021 or BS EN 12390-3:2019 Annex B.
10. The test cube FAILS TO COMPLY with the requirements of BS EN 12390 and has been REJECTED for compressive strength testing in accordance with BS EN 12390-3:2019.
11. The test cube, stored in water at 20°C ±2°C, has been tested for compressive strength and density, AT CLIENT'S INSTRUCTION.
12. Flatness checks comply with the requirements of BS EN 12390-1:2021.
13. Perpendicularity checks comply with the requirements of BS EN 12390-1:2021.
14. Measured dimensions FAIL TO COMPLY with the requirements of BS EN 12390-1:2021.
15. Flatness checks on loading surfaces FAIL TO COMPLY with the requirements of BS EN 12390-1:2021.
16. Perpendicularity checks FAIL TO COMPLY with the requirements of BS EN 12390-1:2021.
17. Tested for compressive strength in accordance with BS EN 12390-3:2019 and density in accordance with BS EN 12390-7:2019
18. Tested for compressive strength in accordance with BS EN 12390-3:2019 Annex B and density in accordance with BS EN 12390-7:2019
19. Curing tank temperatures are outside the tolerances required to BS EN 12390-2
20. Nonconforming Test - Not covered by UKAS Accreditation

Remarks:

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Amended report. This test report supersedes test report version 1 - Additional sample results added to report

Report Format: Cube/TP27/Rep Issue 1 Rev 3 07/22

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END OF REPORT

Compressive Strength and Hardened Density of Cube Specimens

In Accordance with BS EN 12390-3:2019 And BS EN 12390-7:2019

REPORT NUMBER:	C4002778 / 13374.3.1.23		
CLIENT:	Tinnelly Construction	SAMPLING LOCATION:	Little Shinfield
ADDRESS:	10 Newtown Road, Rostrevor, Co Down, BT34 3BY, BT34 3BY	SPECIFIED CHARACTERISTIC STRENGTH:	0N/mm ² at 0 Days
CONTRACT:	Beke Avenue, Shinfield, Reading, RG2 9EH	SUPPLIER:	Gloucestershire concrete , Devizes
CONTRACT ADDRESS:	Beke Avenue , Shinfield , Reading, RG2 9EH	DATE SAMPLED / TIME CAST:	28/05/2024 08:30
SAMPLED BY:	Chris Hallam	DATE RECEIVED:	29/05/2024
SAMPLING PLAN:	Simtec procedure	DESIGNATED CUBE DIMENSION:	100mm
METHOD OF SAMPLING:	Composite - BS EN 12350-1	TYPE OF CUBE:	Concrete Cube
ENVIRONMENTAL CONDITIONS:	Raining	METHOD OF COMPACTION:	Tamping bar typically 25 blows per layer
CONDITION ON RECEIPT:	Acceptable	INITIAL CURING METHOD:	Covered with damp hessian & plastic @ 15 - 25°C
		METHOD OF CURING AFTER DE-MOULDING:	Water cured in tanks maintained @ 18-22°C
MIX DESIGNATION:	C25-c30	DELIVERY TICKET:	Na
CAST BY:	Simtec - Chris Hallam	TESTED BY:	CN, LH

RESULT Test Location: Simtec East Goscote

Cube Reference	Client Reference	Date of Test	Age at Test (Days)	Condition at test	Mass of Specimen (g)	Specimen Dimensions			Specimen Density (kg/m ³)	Maximum Load (kN)	Compressive Strength (N/mm ²)	Mode of Failure	Remarks
						Height (mm)	Width (mm)	Depth (mm)					
B26333.1	13374.2.1.2/1	04/06/2024	7	Saturated	2367.4	100.0	100.0	100.0	2340	189.2	18.9	Normal (S)	1,7,17
B26333.2	13374.2.1.2/2	25/06/2024	28	Saturated	2384.8	100.0	100.0	100.0	2340	245.6	24.6	Normal (S)	1,7,17
B26333.3	13374.2.1.2/3	23/07/2024	56			100.0	100.0	100.0					

Volume for density determined by checked, designated size. Measured size used only if outside check tolerances.

Remarks:

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Amended report. This test report supersedes test report version 1 - Additional sample results added to report
Report Format: Cube/TP27/Rep Issue 1 Rev 3 07/22

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For and on behalf of Simtec
Robert McGoff - Laboratory Supervisor



Approved Signatory
Report date 25-Jun-24



10108

Compressive Strength and Hardened Density of Cube Specimens

In Accordance with BS EN 12390-3:2019 And BS EN 12390-7:2019

REPORT NUMBER: C4002778 / 13374.3.1.23

Remarks

1. Appropriate documentation has been received stating the cubes tested from the above batch have been manufactured in calibrated moulds in accordance with the requirements of BS EN 12390-2:2019.
2. Appropriate documentation has NOT been received stating the cubes tested from the above batch have been manufactured in calibrated moulds in accordance with the requirements of BS EN 12390-2:2019 and so require additional checks for compliance as per BS EN 12390-1: 2021 prior to test.
3. These test results relate to cubes which DO NOT meet the dimensional requirements of BS EN 12390-1 but comply with the requirements of BS EN 12390-3:2019 Annex B.
4. These test results relate to cubes which DO NOT meet the dimensional requirements of BS EN 12390-1 or BS EN 12390-3:2019 Annex B.
5. These test results relate to cubes which DO NOT meet the dimensional requirements and/or shape requirements of BS EN 12390-1.
6. These test results relate to cubes which DO NOT meet the dimensional and/or shape requirements of BS EN 12390-1 and BS EN 12390-3:2019 Annex B.
7. Dimensions comply with the requirements of BS EN 12390-1:2021.
8. Dimensions DO NOT comply with the requirements of BS EN 12390-1:2021 but do comply with the requirements of BS EN 12390-3:2019 Annex B.
9. Dimensions DO NOT comply with the requirements of BS EN 12390-1:2021 or BS EN 12390-3:2019 Annex B.
10. The test cube FAILS TO COMPLY with the requirements of BS EN 12390 and has been REJECTED for compressive strength testing in accordance with BS EN 12390-3:2019.
11. The test cube, stored in water at 20°C ±2°C, has been tested for compressive strength and density, AT CLIENT'S INSTRUCTION.
12. Flatness checks comply with the requirements of BS EN 12390-1:2021.
13. Perpendicularity checks comply with the requirements of BS EN 12390-1:2021.
14. Measured dimensions FAIL TO COMPLY with the requirements of BS EN 12390-1:2021.
15. Flatness checks on loading surfaces FAIL TO COMPLY with the requirements of BS EN 12390-1:2021.
16. Perpendicularity checks FAIL TO COMPLY with the requirements of BS EN 12390-1:2021.
17. Tested for compressive strength in accordance with BS EN 12390-3:2019 and density in accordance with BS EN 12390-7:2019
18. Tested for compressive strength in accordance with BS EN 12390-3:2019 Annex B and density in accordance with BS EN 12390-7:2019
19. Curing tank temperatures are outside the tolerances required to BS EN 12390-2
20. Nonconforming Test - Not covered by UKAS Accreditation

Remarks:

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Amended report. This test report supersedes test report version 1 - Additional sample results added to report

Report Format: Cube/TP27/Rep Issue 1 Rev 3 07/22

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END OF REPORT

Compressive Strength and Hardened Density of Cube Specimens

In Accordance with BS EN 12390-3:2019 And BS EN 12390-7:2019

REPORT NUMBER:	C4002778 / 13374.3.1.8	SAMPLING LOCATION:	Little Shinfield
CLIENT:	Tinnelly Construction	SPECIFIED CHARACTERISTIC STRENGTH:	0N/mm ² at 0 Days
ADDRESS:	10 Newtown Road, Rostrevor, Co Down, BT34 3BY, BT34 3BY	SUPPLIER:	London concrete , Heathrow
CONTRACT:	Beke Avenue, Shinfield, Reading, RG2 9EH	DATE SAMPLED / TIME CAST:	28/05/2024 15:36
CONTRACT ADDRESS:	Beke Avenue , Shinfield , Reading, RG2 9EH	DATE RECEIVED:	29/05/2024
SAMPLED BY:	Chris Hallam	DESIGNATED CUBE DIMENSION:	100mm
SAMPLING PLAN:	Simtec procedure	TYPE OF CUBE:	Concrete Cube
METHOD OF SAMPLING:	Composite - BS EN 12350-1	METHOD OF COMPACTION:	Tamping bar typically 25 blows per layer
ENVIRONMENTAL CONDITIONS:	Overcast	INITIAL CURING METHOD:	Covered with damp hessian & plastic @ 18 - 22°C
CONDITION ON RECEIPT:	Acceptable	METHOD OF CURING AFTER DE-MOULDING:	Water cured in tanks maintained @ 18-22°C
MIX DESIGNATION:	C25-c30	DELIVERY TICKET:	Na
CAST BY:	Simtec - Chris Hallam	TESTED BY:	CN, LH

RESULT Test Location: Simtec East Goscote

Cube Reference	Client Reference	Date of Test	Age at Test (Days)	Condition at test	Mass of Specimen (g)	Specimen Dimensions			Specimen Density (kg/m ³)	Maximum Load (kN)	Compressive Strength (N/mm ²)	Mode of Failure	Remarks
						Height (mm)	Width (mm)	Depth (mm)					
B26453.1	13374.2.1.9/1	04/06/2024	7	Saturated	2412.3	100.0	100.0	100.0	2380	250.5	25.1	Normal (S)	1,7,17
B26453.2	13374.2.1.9/2	25/06/2024	28	Saturated	2406.1	100.0	100.0	100.0	2370	325.4	32.5	Normal (S)	1,7,17
B26453.3	13374.2.1.9/3	23/07/2024	56			100.0	100.0	100.0					

Volume for density determined by checked, designated size. Measured size used only if outside check tolerances.

Remarks:

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Amended report. This test report supersedes test report version 1 - Additional sample results added to report
Report Format: Cube/TP27/Rep Issue 1 Rev 3 07/22

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For and on behalf of Simtec
Robert McGoff - Laboratory Supervisor



Approved Signatory
Report date 25-Jun-24



10108

Compressive Strength and Hardened Density of Cube Specimens

In Accordance with BS EN 12390-3:2019 And BS EN 12390-7:2019

REPORT NUMBER: C4002778 / 13374.3.1.8

Remarks

1. Appropriate documentation has been received stating the cubes tested from the above batch have been manufactured in calibrated moulds in accordance with the requirements of BS EN 12390-2:2019.
2. Appropriate documentation has NOT been received stating the cubes tested from the above batch have been manufactured in calibrated moulds in accordance with the requirements of BS EN 12390-2:2019 and so require additional checks for compliance as per BS EN 12390-1: 2021 prior to test.
3. These test results relate to cubes which DO NOT meet the dimensional requirements of BS EN 12390-1 but comply with the requirements of BS EN 12390-3:2019 Annex B.
4. These test results relate to cubes which DO NOT meet the dimensional requirements of BS EN 12390-1 or BS EN 12390-3:2019 Annex B.
5. These test results relate to cubes which DO NOT meet the dimensional requirements and/or shape requirements of BS EN 12390-1.
6. These test results relate to cubes which DO NOT meet the dimensional and/or shape requirements of BS EN 12390-1 and BS EN 12390-3:2019 Annex B.
7. Dimensions comply with the requirements of BS EN 12390-1:2021.
8. Dimensions DO NOT comply with the requirements of BS EN 12390-1:2021 but do comply with the requirements of BS EN 12390-3:2019 Annex B.
9. Dimensions DO NOT comply with the requirements of BS EN 12390-1:2021 or BS EN 12390-3:2019 Annex B.
10. The test cube FAILS TO COMPLY with the requirements of BS EN 12390 and has been REJECTED for compressive strength testing in accordance with BS EN 12390-3:2019.
11. The test cube, stored in water at 20°C ±2°C, has been tested for compressive strength and density, AT CLIENT'S INSTRUCTION.
12. Flatness checks comply with the requirements of BS EN 12390-1:2021.
13. Perpendicularity checks comply with the requirements of BS EN 12390-1:2021.
14. Measured dimensions FAIL TO COMPLY with the requirements of BS EN 12390-1:2021.
15. Flatness checks on loading surfaces FAIL TO COMPLY with the requirements of BS EN 12390-1:2021.
16. Perpendicularity checks FAIL TO COMPLY with the requirements of BS EN 12390-1:2021.
17. Tested for compressive strength in accordance with BS EN 12390-3:2019 and density in accordance with BS EN 12390-7:2019
18. Tested for compressive strength in accordance with BS EN 12390-3:2019 Annex B and density in accordance with BS EN 12390-7:2019
19. Curing tank temperatures are outside the tolerances required to BS EN 12390-2
20. Nonconforming Test - Not covered by UKAS Accreditation

Remarks:

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Accreditation. The laboratory does not apply a conformity statement to test reports as standard, unless specifically requested by the customer.

Amended report. This test report supersedes test report version 1 - Additional sample results added to report

Report Format: Cube/TP27/Rep Issue 1 Rev 3 07/22

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END OF REPORT

Compressive Strength and Hardened Density of Cube Specimens

In Accordance with BS EN 12390-3:2019 And BS EN 12390-7:2019

REPORT NUMBER: C4002778 / 13374.3.1.5
CLIENT: Tinnelly Construction
ADDRESS: 10 Newtown Road, Rostrevor, Co Down, BT34 3BY, BT34 3BY
CONTRACT: Beke Avenue, Shinfield, Reading, RG2 9EH
CONTRACT ADDRESS: Beke Avenue, Shinfield, Reading, RG2 9EH
SAMPLED BY: Chris Hallam
SAMPLING PLAN: Simtec procedure
METHOD OF SAMPLING: Composite - BS EN 12350-1
ENVIRONMENTAL CONDITIONS: Overcast
CONDITION ON RECEIPT: Acceptable
MIX DESIGNATION: C25-c30
CAST BY: Simtec - Chris Hallam
SAMPLING LOCATION: Little Shinfield
SPECIFIED CHARACTERISTIC STRENGTH: 0N/mm² at 0 Days
SUPPLIER: Gloucestershire concrete, Reading field
DATE SAMPLED / TIME CAST: 28/05/2024 11:55
DATE RECEIVED: 29/05/2024
DESIGNATED CUBE DIMENSION: 100mm
TYPE OF CUBE: Concrete Cube
METHOD OF COMPACTION: Tamping bar typically 25 blows per layer
INITIAL CURING METHOD: Covered with damp hessian & plastic @ 18 - 22°C
METHOD OF CURING AFTER DE-MOULDING: Water cured in tanks maintained @ 18-22°C
DELIVERY TICKET: Na
TESTED BY: CN, LH

RESULT Test Location: Simtec East Goscote

Cube Reference	Client Reference	Date of Test	Age at Test (Days)	Condition at test	Mass of Specimen (g)	Specimen Dimensions			Specimen Density (kg/m ³)	Maximum Load (kN)	Compressive Strength (N/mm ²)	Mode of Failure	Remarks
						Height (mm)	Width (mm)	Depth (mm)					
B26433.1	13374.2.1.5/1	04/06/2024	7	Saturated	2320.2	100.0	100.0	100.0	2300	183.8	18.4	Normal (S)	1,7,17
B26433.2	13374.2.1.5/2	25/06/2024	28	Saturated	2332.1	100.0	100.0	100.0	2300	252.3	25.2	Normal (S)	1,7,17
B26433.3	13374.2.1.5/3	23/07/2024	56			100.0	100.0	100.0					

Volume for density determined by checked, designated size. Measured size used only if outside check tolerances.

Remarks:

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Amended report. This test report supersedes test report version 1 - Additional sample results added to report
Report Format: Cube/TP27/Rep Issue 1 Rev 3 07/22

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For and on behalf of Simtec
Robert McGoff - Laboratory Supervisor

Approved Signatory
Report date 25-Jun-24



10108

Compressive Strength and Hardened Density of Cube Specimens

In Accordance with BS EN 12390-3:2019 And BS EN 12390-7:2019

REPORT NUMBER: C4002778 / 13374.3.1.5

Remarks

1. Appropriate documentation has been received stating the cubes tested from the above batch have been manufactured in calibrated moulds in accordance with the requirements of BS EN 12390-2:2019.
2. Appropriate documentation has NOT been received stating the cubes tested from the above batch have been manufactured in calibrated moulds in accordance with the requirements of BS EN 12390-2:2019 and so require additional checks for compliance as per BS EN 12390-1: 2021 prior to test.
3. These test results relate to cubes which DO NOT meet the dimensional requirements of BS EN 12390-1 but comply with the requirements of BS EN 12390-3:2019 Annex B.
4. These test results relate to cubes which DO NOT meet the dimensional requirements of BS EN 12390-1 or BS EN 12390-3:2019 Annex B.
5. These test results relate to cubes which DO NOT meet the dimensional requirements and/or shape requirements of BS EN 12390-1.
6. These test results relate to cubes which DO NOT meet the dimensional and/or shape requirements of BS EN 12390-1 and BS EN 12390-3:2019 Annex B.
7. Dimensions comply with the requirements of BS EN 12390-1:2021.
8. Dimensions DO NOT comply with the requirements of BS EN 12390-1:2021 but do comply with the requirements of BS EN 12390-3:2019 Annex B.
9. Dimensions DO NOT comply with the requirements of BS EN 12390-1:2021 or BS EN 12390-3:2019 Annex B.
10. The test cube FAILS TO COMPLY with the requirements of BS EN 12390 and has been REJECTED for compressive strength testing in accordance with BS EN 12390-3:2019.
11. The test cube, stored in water at 20°C ±2°C, has been tested for compressive strength and density, AT CLIENT'S INSTRUCTION.
12. Flatness checks comply with the requirements of BS EN 12390-1:2021.
13. Perpendicularity checks comply with the requirements of BS EN 12390-1:2021.
14. Measured dimensions FAIL TO COMPLY with the requirements of BS EN 12390-1:2021.
15. Flatness checks on loading surfaces FAIL TO COMPLY with the requirements of BS EN 12390-1:2021.
16. Perpendicularity checks FAIL TO COMPLY with the requirements of BS EN 12390-1:2021.
17. Tested for compressive strength in accordance with BS EN 12390-3:2019 and density in accordance with BS EN 12390-7:2019
18. Tested for compressive strength in accordance with BS EN 12390-3:2019 Annex B and density in accordance with BS EN 12390-7:2019
19. Curing tank temperatures are outside the tolerances required to BS EN 12390-2
20. Nonconforming Test - Not covered by UKAS Accreditation

Remarks:

Test results reported relate only to the items tested.

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Amended report. This test report supersedes test report version 1 - Additional sample results added to report

Report Format: Cube/TP27/Rep Issue 1 Rev 3 07/22

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END OF REPORT

Compressive Strength and Hardened Density of Cube Specimens

In Accordance with BS EN 12390-3:2019 And BS EN 12390-7:2019

REPORT NUMBER:	C4002778 / 13374.3.1.32	SAMPLING LOCATION:	Little Shinfield
CLIENT:	Tinnelly Construction	SPECIFIED CHARACTERISTIC STRENGTH:	0N/mm ² at 0 Days
ADDRESS:	10 Newtown Road, Rostrevor, Co Down, BT34 3BY, BT34 3BY	SUPPLIER:	London concrete , Heathrow
CONTRACT:	Beke Avenue, Shinfield, Reading, RG2 9EH	DATE SAMPLED / TIME CAST:	28/05/2024 12:43
CONTRACT ADDRESS:	Beke Avenue , Shinfield , Reading, RG2 9EH	DATE RECEIVED:	29/05/2024
SAMPLED BY:	Chris Hallam	DESIGNATED CUBE DIMENSION:	100mm
SAMPLING PLAN:	Simtec procedure	TYPE OF CUBE:	Concrete Cube
METHOD OF SAMPLING:	Composite - BS EN 12350-1	METHOD OF COMPACTION:	Tamping bar typically 25 blows per layer
ENVIRONMENTAL CONDITIONS:	Overcast	INITIAL CURING METHOD:	Covered with damp hessian & plastic @ 15 - 25°C
CONDITION ON RECEIPT:	Acceptable	METHOD OF CURING AFTER DE-MOULDING:	Water cured in tanks maintained @ 18-22°C
MIX DESIGNATION:	C25-c30	DELIVERY TICKET:	Na
CAST BY:	Simtec - Chris Hallam	TESTED BY:	CN, LH

RESULT Test Location: Simtec East Goscote

Cube Reference	Client Reference	Date of Test	Age at Test (Days)	Condition at test	Mass of Specimen (g)	Specimen Dimensions			Specimen Density (kg/m ³)	Maximum Load (kN)	Compressive Strength (N/mm ²)	Mode of Failure	Remarks
						Height (mm)	Width (mm)	Depth (mm)					
B26439.1	13374.2.1.6/1	04/06/2024	7	Saturated	2407.7	100.0	100.0	100.0	2380	217.8	21.8	Normal (S)	1,7,17
B26439.2	13374.2.1.6/2	25/06/2024	28	Saturated	2424.5	100.0	100.0	100.0	2390	297.3	29.7	Normal (S)	1,7,17
B26439.3	13374.2.1.6/3	23/07/2024	56			100.0	100.0	100.0					

Volume for density determined by checked, designated size. Measured size used only if outside check tolerances.

Remarks:

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Amended report. This test report supersedes test report version 1 - Additional sample results added to report
Report Format: Cube/TP27/Rep Issue 1 Rev 3 07/22

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For and on behalf of Simtec
Robert McGoff - Laboratory Supervisor



Approved Signatory
Report date 25-Jun-24



10108

Compressive Strength and Hardened Density of Cube Specimens

In Accordance with BS EN 12390-3:2019 And BS EN 12390-7:2019

REPORT NUMBER: C4002778 / 13374.3.1.32

Remarks

1. Appropriate documentation has been received stating the cubes tested from the above batch have been manufactured in calibrated moulds in accordance with the requirements of BS EN 12390-2:2019.
2. Appropriate documentation has NOT been received stating the cubes tested from the above batch have been manufactured in calibrated moulds in accordance with the requirements of BS EN 12390-2:2019 and so require additional checks for compliance as per BS EN 12390-1: 2021 prior to test.
3. These test results relate to cubes which DO NOT meet the dimensional requirements of BS EN 12390-1 but comply with the requirements of BS EN 12390-3:2019 Annex B.
4. These test results relate to cubes which DO NOT meet the dimensional requirements of BS EN 12390-1 or BS EN 12390-3:2019 Annex B.
5. These test results relate to cubes which DO NOT meet the dimensional requirements and/or shape requirements of BS EN 12390-1.
6. These test results relate to cubes which DO NOT meet the dimensional and/or shape requirements of BS EN 12390-1 and BS EN 12390-3:2019 Annex B.
7. Dimensions comply with the requirements of BS EN 12390-1:2021.
8. Dimensions DO NOT comply with the requirements of BS EN 12390-1:2021 but do comply with the requirements of BS EN 12390-3:2019 Annex B.
9. Dimensions DO NOT comply with the requirements of BS EN 12390-1:2021 or BS EN 12390-3:2019 Annex B.
10. The test cube FAILS TO COMPLY with the requirements of BS EN 12390 and has been REJECTED for compressive strength testing in accordance with BS EN 12390-3:2019.
11. The test cube, stored in water at 20°C ±2°C, has been tested for compressive strength and density, AT CLIENT'S INSTRUCTION.
12. Flatness checks comply with the requirements of BS EN 12390-1:2021.
13. Perpendicularity checks comply with the requirements of BS EN 12390-1:2021.
14. Measured dimensions FAIL TO COMPLY with the requirements of BS EN 12390-1:2021.
15. Flatness checks on loading surfaces FAIL TO COMPLY with the requirements of BS EN 12390-1:2021.
16. Perpendicularity checks FAIL TO COMPLY with the requirements of BS EN 12390-1:2021.
17. Tested for compressive strength in accordance with BS EN 12390-3:2019 and density in accordance with BS EN 12390-7:2019
18. Tested for compressive strength in accordance with BS EN 12390-3:2019 Annex B and density in accordance with BS EN 12390-7:2019
19. Curing tank temperatures are outside the tolerances required to BS EN 12390-2
20. Nonconforming Test - Not covered by UKAS Accreditation

Remarks:

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Amended report. This test report supersedes test report version 1 - Additional sample results added to report

Report Format: Cube/TP27/Rep Issue 1 Rev 3 07/22

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END OF REPORT

Compressive Strength and Hardened Density of Cube Specimens

In Accordance with BS EN 12390-3:2019 And BS EN 12390-7:2019

REPORT NUMBER:	C4002778 / 13374.3.1.29	SAMPLING LOCATION:	Little Shinfield
CLIENT:	Tinnelly Construction	SPECIFIED CHARACTERISTIC STRENGTH:	0N/mm ² at 0 Days
ADDRESS:	10 Newtown Road, Rostrevor, Co Down, BT34 3BY, BT34 3BY	SUPPLIER:	London concrete , Heathrow
CONTRACT:	Beke Avenue, Shinfield, Reading, RG2 9EH	DATE SAMPLED / TIME CAST:	28/05/2024 13:53
CONTRACT ADDRESS:	Beke Avenue , Shinfield , Reading, RG2 9EH	DATE RECEIVED:	29/05/2024
SAMPLED BY:	Chris Hallam	DESIGNATED CUBE DIMENSION:	100mm
SAMPLING PLAN:	Simtec procedure	TYPE OF CUBE:	Concrete Cube
METHOD OF SAMPLING:	Composite - BS EN 12350-1	METHOD OF COMPACTION:	Tamping bar typically 25 blows per layer
ENVIRONMENTAL CONDITIONS:	Overcast	INITIAL CURING METHOD:	Covered with damp hessian & plastic @ 15 - 25°C
CONDITION ON RECEIPT:	Acceptable	METHOD OF CURING AFTER DE-MOULDING:	Water cured in tanks maintained @ 18-22°C
MIX DESIGNATION:	C25-c30	DELIVERY TICKET:	Na
CAST BY:	Simtec - Chris Hallam	TESTED BY:	CN, LH

RESULT Test Location: Simtec East Goscote

Cube Reference	Client Reference	Date of Test	Age at Test (Days)	Condition at test	Mass of Specimen (g)	Specimen Dimensions			Specimen Density (kg/m ³)	Maximum Load (kN)	Compressive Strength (N/mm ²)	Mode of Failure	Remarks
						Height (mm)	Width (mm)	Depth (mm)					
B26444.1	13374.2.1.7/1	04/06/2024	7	Saturated	2418.0	100.0	100.0	100.0	2380	237.9	23.8	Normal (S)	1,7,17
B26444.2	13374.2.1.7/2	25/06/2024	28	Saturated	2423.5	100.0	100.0	100.0	2390	296.9	29.7	Normal (S)	1,7,17
B26444.3	13374.2.1.7/3	23/07/2024	56			100.0	100.0	100.0					

Volume for density determined by checked, designated size. Measured size used only if outside check tolerances.

Remarks:

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Amended report. This test report supersedes test report version 1 - Additional sample results added to report
Report Format: Cube/TP27/Rep Issue 1 Rev 3 07/22

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For and on behalf of Simtec
Robert McGoff - Laboratory Supervisor



Approved Signatory
Report date 25-Jun-24



10108

Compressive Strength and Hardened Density of Cube Specimens

In Accordance with BS EN 12390-3:2019 And BS EN 12390-7:2019

REPORT NUMBER: C4002778 / 13374.3.1.29

Remarks

1. Appropriate documentation has been received stating the cubes tested from the above batch have been manufactured in calibrated moulds in accordance with the requirements of BS EN 12390-2:2019.
2. Appropriate documentation has NOT been received stating the cubes tested from the above batch have been manufactured in calibrated moulds in accordance with the requirements of BS EN 12390-2:2019 and so require additional checks for compliance as per BS EN 12390-1: 2021 prior to test.
3. These test results relate to cubes which DO NOT meet the dimensional requirements of BS EN 12390-1 but comply with the requirements of BS EN 12390-3:2019 Annex B.
4. These test results relate to cubes which DO NOT meet the dimensional requirements of BS EN 12390-1 or BS EN 12390-3:2019 Annex B.
5. These test results relate to cubes which DO NOT meet the dimensional requirements and/or shape requirements of BS EN 12390-1.
6. These test results relate to cubes which DO NOT meet the dimensional and/or shape requirements of BS EN 12390-1 and BS EN 12390-3:2019 Annex B.
7. Dimensions comply with the requirements of BS EN 12390-1:2021.
8. Dimensions DO NOT comply with the requirements of BS EN 12390-1:2021 but do comply with the requirements of BS EN 12390-3:2019 Annex B.
9. Dimensions DO NOT comply with the requirements of BS EN 12390-1:2021 or BS EN 12390-3:2019 Annex B.
10. The test cube FAILS TO COMPLY with the requirements of BS EN 12390 and has been REJECTED for compressive strength testing in accordance with BS EN 12390-3:2019.
11. The test cube, stored in water at 20°C ±2°C, has been tested for compressive strength and density, AT CLIENT'S INSTRUCTION.
12. Flatness checks comply with the requirements of BS EN 12390-1:2021.
13. Perpendicularity checks comply with the requirements of BS EN 12390-1:2021.
14. Measured dimensions FAIL TO COMPLY with the requirements of BS EN 12390-1:2021.
15. Flatness checks on loading surfaces FAIL TO COMPLY with the requirements of BS EN 12390-1:2021.
16. Perpendicularity checks FAIL TO COMPLY with the requirements of BS EN 12390-1:2021.
17. Tested for compressive strength in accordance with BS EN 12390-3:2019 and density in accordance with BS EN 12390-7:2019
18. Tested for compressive strength in accordance with BS EN 12390-3:2019 Annex B and density in accordance with BS EN 12390-7:2019
19. Curing tank temperatures are outside the tolerances required to BS EN 12390-2
20. Nonconforming Test - Not covered by UKAS Accreditation

Remarks:

Test results reported relate only to the items tested.

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Amended report. This test report supersedes test report version 1 - Additional sample results added to report

Report Format: Cube/TP27/Rep Issue 1 Rev 3 07/22

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END OF REPORT

Compressive Strength and Hardened Density of Cube Specimens

In Accordance with BS EN 12390-3:2019 And BS EN 12390-7:2019

REPORT NUMBER: C4002778 / 13374.3.1.26
CLIENT: Tinnelly Construction
ADDRESS: 10 Newtown Road, Rostrevor, Co Down, BT34 3BY, BT34 3BY
CONTRACT: Beke Avenue, Shinfield, Reading, RG2 9EH
CONTRACT ADDRESS: Beke Avenue, Shinfield, Reading, RG2 9EH
SAMPLED BY: Chris Hallam
SAMPLING PLAN: Simtec procedure
METHOD OF SAMPLING: Composite - BS EN 12350-1
ENVIRONMENTAL CONDITIONS: Overcast
CONDITION ON RECEIPT: Acceptable
MIX DESIGNATION: C25-c30
CAST BY: Simtec - Chris Hallam
SAMPLING LOCATION: Little Shinfield
SPECIFIED CHARACTERISTIC STRENGTH: 0N/mm² at 0 Days
SUPPLIER: Gloucestershire concrete, Reading field
DATE SAMPLED / TIME CAST: 28/05/2024 14:48
DATE RECEIVED: 29/05/2024
DESIGNATED CUBE DIMENSION: 100mm
TYPE OF CUBE: Concrete Cube
METHOD OF COMPACTION: Tamping bar typically 25 blows per layer
INITIAL CURING METHOD: Covered with damp hessian & plastic @ 18 - 22°C
METHOD OF CURING AFTER DE-MOULDING: Water cured in tanks maintained @ 18-22°C
DELIVERY TICKET: Na
TESTED BY: CN, LH

RESULT Test Location: Simtec East Goscote

Cube Reference	Client Reference	Date of Test	Age at Test (Days)	Condition at test	Mass of Specimen (g)	Specimen Dimensions			Specimen Density (kg/m ³)	Maximum Load (kN)	Compressive Strength (N/mm ²)	Mode of Failure	Remarks
						Height (mm)	Width (mm)	Depth (mm)					
B26451.1	13374.2.1.8/1	04/06/2024	7	Saturated	2329.7	100.0	100.0	100.0	2310	193.8	19.4	Normal (S)	1,7,17
B26451.2	13374.2.1.8/2	25/06/2024	28	Saturated	2345.7	100.0	100.0	100.0	2320	260.8	26.1	Normal (S)	1,7,17
B26451.3	13374.2.1.8/3	23/07/2024	56			100.0	100.0	100.0					

Volume for density determined by checked, designated size. Measured size used only if outside check tolerances.

Remarks:

Test results reported relate only to the items tested.
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Opinions and interpretations expressed herein are outside the scope of UKAS Accreditation. The laboratory does not apply a conformity statement to test reports as standard, unless specifically requested by the customer.
Amended report. This test report supersedes test report version 1 - Additional sample results added to report
Report Format: Cube/TP27/Rep Issue 1 Rev 3 07/22

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For and on behalf of Simtec
Robert McGoff - Laboratory Supervisor



Approved Signatory
Report date 25-Jun-24



10108

Compressive Strength and Hardened Density of Cube Specimens

In Accordance with BS EN 12390-3:2019 And BS EN 12390-7:2019

REPORT NUMBER: C4002778 / 13374.3.1.26

Remarks

1. Appropriate documentation has been received stating the cubes tested from the above batch have been manufactured in calibrated moulds in accordance with the requirements of BS EN 12390-2:2019.
2. Appropriate documentation has NOT been received stating the cubes tested from the above batch have been manufactured in calibrated moulds in accordance with the requirements of BS EN 12390-2:2019 and so require additional checks for compliance as per BS EN 12390-1: 2021 prior to test.
3. These test results relate to cubes which DO NOT meet the dimensional requirements of BS EN 12390-1 but comply with the requirements of BS EN 12390-3:2019 Annex B.
4. These test results relate to cubes which DO NOT meet the dimensional requirements of BS EN 12390-1 or BS EN 12390-3:2019 Annex B.
5. These test results relate to cubes which DO NOT meet the dimensional requirements and/or shape requirements of BS EN 12390-1.
6. These test results relate to cubes which DO NOT meet the dimensional and/or shape requirements of BS EN 12390-1 and BS EN 12390-3:2019 Annex B.
7. Dimensions comply with the requirements of BS EN 12390-1:2021.
8. Dimensions DO NOT comply with the requirements of BS EN 12390-1:2021 but do comply with the requirements of BS EN 12390-3:2019 Annex B.
9. Dimensions DO NOT comply with the requirements of BS EN 12390-1:2021 or BS EN 12390-3:2019 Annex B.
10. The test cube FAILS TO COMPLY with the requirements of BS EN 12390 and has been REJECTED for compressive strength testing in accordance with BS EN 12390-3:2019.
11. The test cube, stored in water at 20°C ±2°C, has been tested for compressive strength and density, AT CLIENT'S INSTRUCTION.
12. Flatness checks comply with the requirements of BS EN 12390-1:2021.
13. Perpendicularity checks comply with the requirements of BS EN 12390-1:2021.
14. Measured dimensions FAIL TO COMPLY with the requirements of BS EN 12390-1:2021.
15. Flatness checks on loading surfaces FAIL TO COMPLY with the requirements of BS EN 12390-1:2021.
16. Perpendicularity checks FAIL TO COMPLY with the requirements of BS EN 12390-1:2021.
17. Tested for compressive strength in accordance with BS EN 12390-3:2019 and density in accordance with BS EN 12390-7:2019
18. Tested for compressive strength in accordance with BS EN 12390-3:2019 Annex B and density in accordance with BS EN 12390-7:2019
19. Curing tank temperatures are outside the tolerances required to BS EN 12390-2
20. Nonconforming Test - Not covered by UKAS Accreditation

Remarks:

Test results reported relate only to the items tested.

This report shall not be reproduced except in full without approval of the Laboratory.

Opinions and interpretations expressed herein are outside the scope of UKAS

Accreditation. The laboratory does not apply a conformity statement to test reports as standard, unless specifically requested by the customer.

Amended report. This test report supersedes test report version 1 - Additional sample results added to report

Report Format: Cube/TP27/Rep Issue 1 Rev 3 07/22

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Leicester LE7 3XD0116 319 6100
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END OF REPORT

Appendix D

Topsoil Analysis Report and Verification Photographs





TIM O'HARE ASSOCIATES
SOIL & LANDSCAPE CONSULTANCY

Mr John McAvoy
R Collard Limited
Eversley Haulage Park
Brickhouse Hill
Eversley, Hook
Hampshire RG27 0PZ

28th May 2024
Our Ref: TOHA/23/1379/1/SS
Your Ref: JM-EQ

Dear Sirs

Topsoil Analysis Report: Eversley Quarry

We have completed the analysis of the soil sample recently submitted, referenced *Eversley Topsoil*, and have pleasure reporting our findings.

The purpose of the analysis was to determine the suitability of the sample for general landscape purposes (trees, shrubs, amenity grass). In addition, the sample has been assessed to determine its compliance with the requirements of the British Standard for Topsoil (BS3882:2015 – *Specification for Topsoil – Table 1, Multipurpose Topsoil*).

This report presents the results of analysis for the sample submitted to our office, and it should be considered 'indicative' of the topsoil source. The report and results should therefore not be used by third parties as a means of verification or validation testing or waste designation purposes, especially after the topsoil has left the R Collard Limited site.

SAMPLE EXAMINATION

The sample was described as pale yellow (Munsell Colour 2.5YR 7/4), slightly moist, non-plastic, slightly calcareous, LOAMY SAND with a single grain structure*. The sample was virtually stone-free and contained a moderate proportion of organic fines and occasional woody fragments. No unusual odours, deleterious materials, roots or rhizomes of pernicious weeds were observed.

*This appraisal of soil structure was made from examination of a disturbed sample. Structure is a key soil characteristic that may only be accurately assessed by examination in an in-situ state.

Tim O'Hare Associates LLP
Howbery Park Wallingford Oxfordshire OX10 8BA
T:01491 822653 E:info@toha.co.uk
www.toha.co.uk

ANALYTICAL SCHEDULE

The sample was submitted to a UKAS and MCERTS accredited laboratory for a range of physical and chemical tests to confirm the composition and fertility of the soil, and the concentration of selected potential contaminants. The following parameters were determined:

- detailed particle size analysis (5 sands, silt, clay);
- stone content (2-20mm, 20-50mm, >50mm);
- pH and electrical conductivity values;
- exchangeable sodium percentage;
- major plant nutrients (N, P, K, Mg);
- organic matter content;
- C:N ratio;
- heavy metals (As, B, Cd, Cr, Cu, Pb, Hg, Ni, Se, Zn);
- total cyanide and total (mono) phenols;
- speciated PAHs (US EPA16 suite);
- aromatic and aliphatic TPH (C5-C35 banding);
- benzene, toluene, ethylbenzene, xylene (BTEX);
- asbestos screen.

The results are presented on the attached Certificate of Analysis and an interpretation of the results is given below.

RESULTS OF ANALYSIS

Detailed Particle Size Analysis and Stone Content

The sample fell into the *loamy sand* texture class and exceeded our maximum recommended sand content of 85% for general landscape purposes. Further detailed particle size analysis found the sample to have a high proportion of particles in the *fine sand* (0.15-0.25mm) and *medium sand* (0.25-0.50mm) fractions with lower proportions of *very fine sand* (0.05-0.15mm) and *coarse sand* (0.50-1.0mm) .

Such soils typically have good aeration and drainage properties, but can possess reduced water and nutrient retention capacities. However, in this instance the soil's organic matter content (5.0 %) is likely to offset these factors and provide a suitable growing medium for general landscape applications.

The sample was virtually stone-free and as such, stones should not restrict the use of the soil for general landscape purposes.

pH and Electrical Conductivity Values

The sample was alkaline in reaction (pH 7.7). This pH value would be considered suitable for general landscape purposes provided species with a wide pH tolerance or those known to prefer alkaline soils are selected for planting, turfing and seeding.

The electrical conductivity (salinity) value (water extract) was moderate, which indicates that soluble salts should not be present at levels that would be harmful to plants.

The electrical conductivity value by CaSO₄ extract (1545 µS/cm - BS3882 requirement) slightly exceeded the maximum specified value (3300 µS/cm) given in BS3882:2015 – Table 1. Further testing of electrical conductivity by water extract indicates that excess soluble salts should not present a significant risk to plants.

Organic Matter and Fertility Status

The sample was adequate to well supplied with organic matter and all major plant nutrients.

The C:N ratio of the sample was acceptable for general landscape purposes.

Potential Contaminants

With reference to *BS3882:2015 – Table 1*: Notes 3 and 4, there is a requirement to confirm levels of potential contaminants in relation to the topsoil's proposed end use. This includes human health, environmental protection and metals considered toxic to plants. In the absence of site-specific assessment criteria, the concentrations that affect human health have been compared with the *residential with homegrown produce* land use in the Suitable For Use Levels (S4ULs) presented in *The LQM/CIEH S4ULs for Human Health Risk Assessment* (2015) and the DEFRA SP1010: *Development of Category 4 Screening Levels (C4SLs) for Assessment of Land Affected by Contamination – Policy Companion Document* (2014).

Of the potential contaminants determined, none was found at levels that exceeded their guideline values.

Phytotoxic Contaminants

Of the phytotoxic (toxic to plants) contaminants determined (copper, nickel, zinc), none was found at levels that exceeded the maximum permissible levels specified in *BS3882:2015 – Table 1*.

CONCLUSION

The purpose of the analysis was to determine the suitability of the topsoil sample for general landscape purposes. The analysis has also been undertaken to determine the sample's compliance with the requirements of the British Standard for Topsoil (*BS3882:2015 – Specification for Topsoil – Table 1, Multipurpose Topsoil*).

From the soil examination and subsequent laboratory analysis, the sample was described as a alkaline, non-saline, slightly calcareous *loamy sand* with an adequate structure and a low stone content. The sample was adequately supplied with organic matter and all major plant nutrients. Of the potential contaminants determined, none exceeded their respective guideline values.

Based on our findings, the topsoil represented by this sample would be considered suitable for general landscape purposes (trees, shrubs and amenity grass (low footfall)), provided that the species selected have a wide pH tolerance or are known to prefer alkaline soils, and the physical condition of the soil is satisfactory.

The topsoil was also fully compliant with the requirements of the British Standard for Topsoil (*BS3882:2015 – Specification for Topsoil – Table 1, Multipurpose Topsoil*).

RECOMMENDATIONS

Soil Handling Recommendations

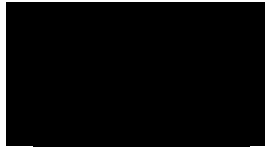
It is important to maintain the physical condition of the soil and avoid structural damage during all phases of soil handling (e.g. stockpiling, resspreading, cultivating, planting, seeding or turfing). As a consequence, soil handling operations should be carried out when soil is sufficiently dry to be non-plastic (friable) in consistency.

It is important to ensure that the soil is not unnecessarily compacted by trampling or trafficking by site machinery, and soil handling should be stopped during and after heavy rainfall and not continued until the soil is friable in consistency. If the soil is structurally damaged and compacted at any stage during the course of soiling or landscaping works, it should be cultivated appropriately to relieve the compaction and to restore the soil's structure prior to any planting, turfing or seeding.

Further details on soil handling are provided in Annex A of *BS3882:2015*.

We hope this report meets with your approval and provides the necessary information. Please do not hesitate to contact the undersigned if we can be of further assistance.

Yours faithfully



Ebony Gheorghe
BSc MSc
Soil Scientist



Tim White
BSc MSc MSc SoilSci CSci
Senior Associate

For & on behalf of Tim O'Hare Associates LLP



TIM O'HARE ASSOCIATES
SOIL & LANDSCAPE CONSULTANCY

Client:	R Collard Limited
Project:	Eversley Quarry
Job:	Topsoil Analysis (BS3882:2015)
Date:	28/05/2024
Job Ref No:	TOHA/24/1379/1/SS

Sample Reference		Accreditation
Clay (<0.002mm)	%	UKAS
Silt (0.002-0.063mm)	%	UKAS
Very Fine Sand (0.05-0.15mm)	%	UKAS
Fine Sand (0.15-0.25mm)	%	UKAS
Medium Sand (0.25-0.50mm)	%	UKAS
Coarse Sand (0.50-1.0mm)	%	UKAS
Very Coarse Sand (1.0-2.0mm)	%	UKAS
Total Sand	%	UKAS
Texture Class (UK Classification)	--	UKAS
Stones (2-20mm)	% DW	GLP
Stones (20-50mm)	% DW	GLP
Stones (>50mm)	% DW	GLP

pH Value (1:2.5 water extract)	units	UKAS
Electrical Conductivity (1:2.5 water extract)	uS/cm	UKAS
Electrical Conductivity (1:2 CaSO ₄ extract)	uS/cm	UKAS
Exchangeable Sodium Percentage	%	UKAS
Organic Matter (LOI)	%	UKAS
Total Nitrogen (Dumas)	%	UKAS
C : N Ratio	ratio	UKAS
Extractable Phosphorus	mg/l	UKAS
Extractable Potassium	mg/l	UKAS
Extractable Magnesium	mg/l	UKAS

Total Arsenic (As)	mg/kg	MCERTS
Total Cadmium (Cd)	mg/kg	MCERTS
Total Chromium (Cr)	mg/kg	MCERTS
Hexavalent Chromium (Cr VI)	mg/kg	MCERTS
Total Copper (Cu)	mg/kg	MCERTS
Total Lead (Pb)	mg/kg	MCERTS
Total Mercury (Hg)	mg/kg	MCERTS
Total Nickel (Ni)	mg/kg	MCERTS
Total Selenium (Se)	mg/kg	MCERTS
Total Zinc (Zn)	mg/kg	MCERTS
Water Soluble Boron (B)	mg/kg	MCERTS
Total Cyanide (CN)	mg/kg	MCERTS
Total (mono) Phenols	mg/kg	MCERTS

Naphthalene	mg/kg	MCERTS
Acenaphthylene	mg/kg	MCERTS
Acenaphthene	mg/kg	MCERTS
Fluorene	mg/kg	MCERTS
Phenanthrene	mg/kg	MCERTS
Anthracene	mg/kg	MCERTS
Fluoranthene	mg/kg	MCERTS
Pyrene	mg/kg	MCERTS
Benz(a)anthracene	mg/kg	MCERTS
Chrysene	mg/kg	MCERTS
Benzo(b)fluoranthene	mg/kg	MCERTS
Benzo(k)fluoranthene	mg/kg	MCERTS
Benzo(a)pyrene	mg/kg	MCERTS
Indeno(1,2,3-cd)pyrene	mg/kg	MCERTS
Dibenzo(a,h)anthracene	mg/kg	MCERTS
Benzo(g,h,i)perylene	mg/kg	MCERTS
Total PAHs (sum USEPA16)	mg/kg	MCERTS

Aliphatic TPH >C5 - C6	mg/kg	MCERTS
Aliphatic TPH >C6 - C8	mg/kg	MCERTS
Aliphatic TPH >C8 - C10	mg/kg	MCERTS
Aliphatic TPH >C10 - C12	mg/kg	MCERTS
Aliphatic TPH >C12 - C16	mg/kg	MCERTS
Aliphatic TPH >C16 - C21	mg/kg	MCERTS
Aliphatic TPH >C21 - C35	mg/kg	MCERTS
Aliphatic TPH (C5 - C35)	mg/kg	MCERTS
Aromatic TPH >C5 - C7	mg/kg	MCERTS
Aromatic TPH >C7 - C8	mg/kg	MCERTS
Aromatic TPH >C8 - C10	mg/kg	MCERTS
Aromatic TPH >C10 - C12	mg/kg	MCERTS
Aromatic TPH >C12 - C16	mg/kg	MCERTS
Aromatic TPH >C16 - C21	mg/kg	MCERTS
Aromatic TPH >C21 - C35	mg/kg	MCERTS
Aromatic TPH (C5 - C35)	mg/kg	MCERTS

Benzene	mg/kg	MCERTS
Toluene	mg/kg	MCERTS
Ethylbenzene	mg/kg	MCERTS
p & m-xylene	mg/kg	MCERTS
o-xylene	mg/kg	MCERTS
MTBE (Methyl Tertiary Butyl Ether)	mg/kg	MCERTS

Asbestos	ND/D	ISO 17025
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LS = LOAMY SAND

Visual Examination

The sample was described as pale yellow (Munsell Colour 2.5YR 7/4), slightly moist, non-plastic, slightly calcareous, LOAMY SAND with a single grain structure. The sample was virtually stone-free and contained a moderate proportion of organic fines and occasional woody fragments. No unusual odours, deleterious materials, roots or rhizomes of pernicious weeds were observed.

Results of analysis should be read in conjunction with the report they were issued with

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Eversley Topsoil

3
10
12
24
46
4
1
87
LS
1
0
0

7.7
1302
3501
2.9
5.0
0.23
13
64
1474
156

6
< 0.2
7
< 1.8
11
7
< 0.3
2
< 1.0
20
0.8
< 1.0
< 1.0

< 0.05
< 0.05
< 0.05
< 0.05
< 0.05
< 0.05
< 0.05
< 0.05
< 0.05
< 0.05
< 0.05
< 0.05
< 0.05
< 0.05
< 0.05
< 0.05
< 0.80

< 0.020
< 0.020
< 0.050
< 1.0
< 2.0
< 8.0
< 8.0
< 10
< 0.010
< 0.010
< 0.050
< 1.0
< 2.0
< 10
< 10
< 10

< 0.005
< 0.005
< 0.005
< 0.005
< 0.005
< 0.005

Not-detected



Ebony Gheorghe
BSc MSc
Soil Scientist

Appendix E

Chemical Laboratory Analysis Results



Obsidian Geo-Consulting Ltd
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Castle Vale Enterprise Park
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West Midlands
B35 6LJ

t: (07715) 527530

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ben.murphy@obsidian-geoconsulting.co.uk

i2 Analytical Ltd.
7 Woodshots Meadow,
Croxley Green
Business Park,
Watford,
Herts,
WD18 8YS

t: 01923 225404
f: 01923 237404
e: reception@i2analytical.com

Analytical Report Number : 24-056298

Project / Site name:	Hollow Lane, Shinfield	Samples received on:	27/11/2024
Your job number:	21-1484-P	Samples instructed on/ Analysis started on:	27/11/2024
Your order number:	01663	Analysis completed by:	04/12/2024
Report Issue Number:	1	Report issued on:	04/12/2024
Samples Analysed:	1 soil sample		

Signed: _____

Anna Goc
PL Head of Reporting Team
For & on behalf of i2 Analytical Ltd.

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41-711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils	- 4 weeks from reporting
leachates	- 2 weeks from reporting
waters	- 2 weeks from reporting
asbestos	- 6 months from reporting

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Any assessments of compliance with specifications are based on actual analytical results with no contribution from uncertainty of measurement.
Application of uncertainty of measurement would provide a range within which the true result lies.
An estimate of measurement uncertainty can be provided on request.

Analytical Report Number: 24-056298
Project / Site name: Hollow Lane, Shinfield
Your Order No: 01663

Lab Sample Number				392637
Sample Reference				HP103
Sample Number				None Supplied
Water Matrix				N/A
Depth (m)				0.40
Date Sampled				20/11/2024
Time Taken				None Supplied
Analytical Parameter (Soil Analysis)	Units	Test Limit of detection	Test Accreditation Status	

Stone Content	%	0.1	NONE	< 0.1
Moisture Content	%	0.01	NONE	18
Total mass of sample received	kg	0.1	NONE	0.8

Asbestos

Asbestos in Soil Detected/Not Detected	Type	N/A	ISO 17025	Not-detected
Asbestos Analyst ID	N/A	N/A	N/A	PKU

General Inorganics

pH (L099)	pH Units	N/A	MCERTS	7.2
Total Cyanide	mg/kg	1	MCERTS	< 1.0
Water Soluble Sulphate as SO ₄ 16hr extraction (2:1)	mg/kg	2.5	MCERTS	1500
Water Soluble SO ₄ 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	771
Sulphide	mg/kg	1	MCERTS	< 1.0

Total Phenols

Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0
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Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	< 0.05
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05
Fluorene	mg/kg	0.05	MCERTS	< 0.05
Phenanthrene	mg/kg	0.05	MCERTS	0.1
Anthracene	mg/kg	0.05	MCERTS	< 0.05
Fluoranthene	mg/kg	0.05	MCERTS	0.29
Pyrene	mg/kg	0.05	MCERTS	0.29
Benzo(a)anthracene	mg/kg	0.05	MCERTS	0.18
Chrysene	mg/kg	0.05	MCERTS	0.21
Benzo(b)fluoranthene	mg/kg	0.05	ISO 17025	0.29
Benzo(k)fluoranthene	mg/kg	0.05	ISO 17025	0.1
Benzo(a)pyrene	mg/kg	0.05	MCERTS	0.23
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	0.14
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	0.16

Total PAH

Speciated Total EPA-16 PAHs	mg/kg	0.8	ISO 17025	2
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Analytical Report Number: 24-056298
 Project / Site name: Hollow Lane, Shinfield
 Your Order No: 01663

Lab Sample Number				392637
Sample Reference				HP103
Sample Number				None Supplied
Water Matrix				N/A
Depth (m)				0.40
Date Sampled				20/11/2024
Time Taken				None Supplied
Analytical Parameter (Soil Analysis)	Units	Test Limit of detection	Test Accreditation Status	

Heavy Metals / Metalloids

Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	6
Boron (water soluble)	mg/kg	0.2	MCERTS	0.7
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	0.2
Chromium (hexavalent) Low Level	mg/kg	1.2	NONE	< 1.2
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	11
Copper (aqua regia extractable)	mg/kg	1	MCERTS	13
Lead (aqua regia extractable)	mg/kg	1	MCERTS	42
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	4.5
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	41

Petroleum Hydrocarbons

TPHCWG - Aliphatic >EC5 - EC6 HS_1D_AL	mg/kg	0.01	MCERTS	< 0.010
TPHCWG - Aliphatic >EC6 - EC8 HS_1D_AL	mg/kg	0.01	MCERTS	< 0.010
TPHCWG - Aliphatic >EC8 - EC10 HS_1D_AL	mg/kg	0.01	MCERTS	< 0.010
TPHCWG - Aliphatic >EC10 - EC12 EH_CU_1D_AL	mg/kg	1	MCERTS	< 1.0
TPHCWG - Aliphatic >EC12 - EC16 EH_CU_1D_AL	mg/kg	2	MCERTS	< 2.0
TPHCWG - Aliphatic >EC16 - EC21 EH_CU_1D_AL	mg/kg	8	MCERTS	< 8.0
TPHCWG - Aliphatic >EC21 - EC35 EH_CU_1D_AL	mg/kg	8	MCERTS	< 8.0
TPHCWG - Aliphatic >EC5 - EC35 EH_CU+HS_1D_AL	mg/kg	10	NONE	< 10

TPHCWG - Aromatic >EC5 - EC7 HS_1D_AR	mg/kg	0.01	MCERTS	< 0.010
TPHCWG - Aromatic >EC7 - EC8 HS_1D_AR	mg/kg	0.01	MCERTS	< 0.010
TPHCWG - Aromatic >EC8 - EC10 HS_1D_AR	mg/kg	0.02	MCERTS	< 0.020
TPHCWG - Aromatic >EC10 - EC12 EH_CU_1D_AR	mg/kg	1	MCERTS	< 1.0
TPHCWG - Aromatic >EC12 - EC16 EH_CU_1D_AR	mg/kg	2	MCERTS	< 2.0
TPHCWG - Aromatic >EC16 - EC21 EH_CU_1D_AR	mg/kg	10	MCERTS	< 10
TPHCWG - Aromatic >EC21 - EC35 EH_CU_1D_AR	mg/kg	10	MCERTS	< 10
TPHCWG - Aromatic >EC5 - EC35 EH_CU+HS_1D_AR	mg/kg	10	NONE	< 10

VOCs

MTBE (Methyl Tertiary Butyl Ether)	µg/kg	5	MCERTS	< 5.0
Benzene	µg/kg	5	MCERTS	< 5.0
Toluene	µg/kg	5	MCERTS	< 5.0
Ethylbenzene	µg/kg	5	MCERTS	< 5.0
p & m-Xylene	µg/kg	8	MCERTS	< 8.0
o-Xylene	µg/kg	5	MCERTS	< 5.0

U/S = Unsuitable Sample I/S = Insufficient Sample ND = Not detected

Analytical Report Number : 24-056298

Project / Site name: Hollow Lane, Shinfield

* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and loam (MCERTS) soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
392637	HP103	None Supplied	0.4	Brown loam and sand with gravel and vegetation

Analytical Report Number : 24-056298

Project / Site name: Hollow Lane, Shinfield

Water matrix abbreviations:

Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters Heating/Cooling (PrW) DI Process Water (DI PrW)

Final Sewage Effluent (FSE) Landfill Leachate (LL)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Asbestos identification in Soil	Asbestos Identification with the use of polarised light microscopy in conjunction with dispersion staining techniques	In-house method based on HSG 248, 2021	A001B	D	ISO 17025
Sulphide in soil	Determination of sulphide in soil by acidification and heating to liberate hydrogen sulphide, trapped in an alkaline solution then assayed by ion selective electrode	In-house method	L010-PL	D	MCERTS
Moisture Content	Moisture content, determined gravimetrically (up to 30°C)	In-house method	L019B	W	NONE
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight	In-house method based on British Standard Methods and MCERTS requirements.	L019B	D	NONE
Metals in soil by ICP-OES	Determination of metals in soil by aqua-regia digestion followed by ICP-OES	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil	L038B	D	MCERTS
Boron, water soluble, in soil	Determination of water soluble boron in soil by hot water extract followed by ICP-OES	In-house method based on Second Site Properties version 3	L038B	D	MCERTS
Sulphate, water soluble, in soil (16hr extraction)	Sulphate, water soluble, in soil (16hr extraction)	In-house method	L038B	D	MCERTS
Speciated PAHs and/or Semi-volatile organic compounds in soil	Determination of semi-volatile organic compounds (including PAH) in soil by extraction in dichloromethane and hexane followed by GC-MS	In-house method based on USEPA 8270	L064B	D	MCERTS
BTEX and/or Volatile organic compounds in soil	Determination of volatile organic compounds in soil by headspace GC-MS	In-house method based on USEPA 8260	L073B	W	MCERTS
Total petroleum hydrocarbons with carbon banding by GC-FID/GC-MS HS in soil	Determination of total petroleum hydrocarbons in soil by GC-FID/GC-MS HS with carbon banding aliphatic and aromatic	In-house method	L076B/L088-PL	D/W	MCERTS
Hexavalent chromium in soil (low level)	Determination of hexavalent chromium in soil by extraction in water then by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry	In-house method	L080-PL	W	NONE
Monohydric phenols in soil	Determination of phenols in soil by extraction with sodium hydroxide followed by distillation followed by colorimetry	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L080-PL	W	MCERTS
Total cyanide in soil	Determination of total cyanide by distillation followed by colorimetry	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L080-PL	W	MCERTS

Analytical Report Number : 24-056298

Project / Site name: Hollow Lane, Shinfield

Water matrix abbreviations:

Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters Heating/Cooling (PrW) DI Process Water (DI PrW)

Final Sewage Effluent (FSE) Landfill Leachate (LL)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
pH in soil (automated)	Determination of pH in soil by addition of water followed by automated electrometric measurement	In-house method	L099-PL	D	MCERTS

For method numbers ending in 'UK' or 'A' analysis have been carried out in our laboratory in the United Kingdom (Watford).

For method numbers ending in 'F' analysis have been carried out in our laboratory in the United Kingdom (East Kilbride).

For method numbers ending in 'PL' or 'B' analysis have been carried out in our laboratory in Poland.

Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.

Unless otherwise indicated, site information, order number, project number, sampling date, time, sample reference and depth are provided by the client. The instructed on date indicates the date on which this information was provided to the laboratory.

Quality control parameter failure associated with individual result applies to calculated sum of individuals.

The result for sum should be interpreted with caution

Analytical Report Number : 24-056298

Project / Site name: Hollow Lane, Shinfield

This deviation report indicates the sample and test deviations that apply to the samples submitted for analysis. Please note that the associated result(s) may be unreliable and should be interpreted with care.

Key: a - No sampling date b - Incorrect container c - Holding time d - Headspace e - Temperature

Sample ID	Other ID	Sample Type	Lab Sample Number	Sample Deviation	Test Name	Test Ref	Test Deviation
HP103	N/A	S	392637	c	BTEX and/or Volatile organic compounds in soil	L073B	c
HP103	N/A	S	392637	c	Speciated PAHs and/or Semi-volatile organic compounds in soil	L064B	c
HP103	N/A	S	392637	c	Total cyanide in soil	L080-PL	c
HP103	N/A	S	392637	c	Total petroleum hydrocarbons with carbon banding by GC-FID/GC-MS HS in soil	L076B/L088-PL	c



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