

Proposed Retail Showroom, 21 Rose Kiln Lane, Reading

Validation Report

On behalf of **Porcelanosa UK Limited**

PORCELANOSA
TILES · BATHROOMS · KITCHENS

Project Ref: 31363/3501 | Document R003 Rev 0 | Date: March 2018



Document Control Sheet

Project Name: Proposed Retail Showroom, 21 Rose Kiln Lane, Reading

Project Ref: 31363/3501

Report Title: Validation Report

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Date: March 2018

	Name	Position	Signature	Date
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For and on behalf of Peter Brett Associates LLP				

Revision	Date	Description	Prepared	Reviewed	Approved
Rev0	April 2018	Issued final to Client	AZ	PJ	PJ

This report has been prepared by Peter Brett Associates LLP ('PBA') on behalf of its client to whom this report is addressed ('Client') in connection with the project described in this report and takes into account the Client's particular instructions and requirements. This report was prepared in accordance with the professional services appointment under which PBA was appointed by its Client. This report is not intended for and should not be relied on by any third party (i.e. parties other than the Client). PBA accepts no duty or responsibility (including in negligence) to any party other than the Client and disclaims all liability of any nature whatsoever to any such party in respect of this report.

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1 Introduction

1.1 Overview

- 1.1.1 Peter Brett Associates LLP (PBA) has been commissioned by Porcelanosa UK Limited (the Client) to prepare a Validation Report to support the discharge of planning condition 26 for the redevelopment of the site at 21 Rose Kiln Lane, Reading, post code RG2 0LE.
- 1.1.2 The Site at 21 Rose Kiln Lane, Reading has been redeveloped by the demolition of the former warehouse and the erection of a new retail warehouse (used class A1) with associated storage, car parking and landscaping.

1.2 Approved Planning Conditions

- 1.2.1 Details of the redevelopment were submitted to Reading Borough Council with the planning application (Application No 140542) dated 14 April 2014. The redevelopment was carried out with the approval of the Reading Borough Council subject to a number of planning conditions as detailed on the Approval Notice dated 2 July 2014. A copy of which is include in **Appendix A** for reference.

Condition 19 of the planning approval is related to Land Gas Ground Investigation and states:

19. No development shall take place until a detailed land gas site investigation has been carried out by a competent person to fully and effectively characterise the nature and extent of land gas and its implications. The method and extent of this site investigation shall be agreed with the Local Planning Authority prior to commencement of the work and shall then proceed in strict accordance with the measures approved.

Condition 20 of the planning approval is related to Land Gas Protection Scheme and states:

20. No development shall take place until a scheme showing how the development is to be protected against the possibility of land gas has been submitted to and approved in writing by the Local Planning Authority. The scheme as approved shall be fully implemented and completed before the development is first occupied and those measures incorporated into the development shall thereafter be retained unless the Local Planning Authority agrees otherwise in writing.

Condition 22 of the planning approval is related to Land Contaminations and states:

22(1) No development approved by this planning permission shall take place until a remediation strategy that includes the following components to deal with the risks associated with contamination of the site shall each be submitted to and approved, in writing, by the local planning authority:

- a) A preliminary risk assessment which has identified: - all previous uses - potential contaminants associated with those uses - a conceptual model of the site indicating sources, pathways and receptors - potentially unacceptable risks arising from contamination at the site.*
- b) A site investigation scheme, based on (1) to provide information for a detailed assessment of the risk to all receptors that may be affected, including those off site.*
- c) The results of the site investigation and the detailed risk assessment referred to in (2) and, based on these, an options appraisal and remediation strategy giving full details of the remediation measures required and how they are to be undertaken.*

- d) A verification plan providing details of the data that will be collected in order to demonstrate that the works set out in the remediation strategy in (3) are complete and identifying any requirements for longer-term monitoring of pollutant linkages, maintenance and arrangements for contingency action.*

Any changes to these components require the express written consent of the local planning authority. The scheme shall be implemented as approved.

- 1.2.2 A Phase 1 and Phase 2 geotechnical and geoenvironmental Ground Condition Assessment was carried out to assess the ground conditions on the Site and the potential for contamination to be present associated with previous and present uses of the Site and the surrounding areas. The report includes a Tier 1 and Tier 2 qualitative geoenvironmental risk assessments to determine whether the Site is suitable for the proposed new use. The report also presented a remediation options appraisal and strategy giving details of the remediation measures required. The findings of the study are presented in a separate report prepared by Peter Brett Associates LLP (PBA, 2016a). These assessments were specifically prepared to address the requirements of Planning Condition 19 (Land Gas Ground Investigation), Planning Conditions 20 (Land Gas Protection Scheme), and Planning Condition 22 Clauses (A, B and C) of the planning the planning approval.
- 1.2.3 Subsequently, a Verification Plan was prepared that presents the details of the data required to be collected in order to comply with the Remediation Strategy to mitigate the risks associated with soil contamination during the construction works together with any residual hazards and constraints associated with soil contamination for its proposed new use. The Verification Plan was specifically prepared to address the requirements of Planning Condition 22 Clause (D) of the planning the planning approval. The requirements of the Verification Report are presented in a separate report prepared by Peter Brett Associates LLP (PBA, 2016b).
- 1.2.4 An application for approval to discharge Planning Conditions 19, 20 and 22 was submitted to Reading Borough Council (Application No 140542) dated 3 March 2016, and approval was granted by Reading Borough Council on 10 November 2016. A copy of that decision notice is included in **Appendix A**.
- 1.2.5 As a result of that decision notice conditions 19, 20 and 22 were amended as follows:

19. The development shall be carried out in accordance with land gas site investigation and measures identified therein submitted to and approved by the Local Planning Authority.

20. The scheme submitted to and hereby approved by the Local Planning Authority showing how the development is to be protected against the possibility of land gas shall be fully implemented and completed before the development is first occupied and those measures incorporated into the development shall thereafter be retained unless the Local Planning Authority agrees otherwise in writing.

22. The development shall be carried out in accordance with the remediation strategy to deal with the risks associated with contamination of the site submitted to and hereby approved by the Local Planning Authority. Any changes to these components require the express written consent of the Local Planning Authority.

1.3 Outstanding Planning Conditions

- 1.3.1 The 10th November 2018 decision notice required confirmed that a number of planning conditions were still outstanding. The detail of the outstanding planning conditions as detailed on by these decision notices are as follows:

Condition 21 of the planning approval is related to Land Gas Remediation Scheme and states:

The land gas remediation scheme shall be implemented in accordance with the approved timetable of works. A validation report (that demonstrates the effectiveness of the remediation carried out) must be submitted to and approved by the Local Planning Authority prior to any part of the accommodation hereby approved is occupied, unless the Local Planning Authority otherwise agrees in writing.

Condition 23 of the planning approval is related to Validation Report and c and states:

No occupation of any part of the permitted development shall take place until a verification report demonstrating completion of works set out in the approved remediation strategy and the effectiveness of the remediation shall be submitted to and approved, in writing, by the Local Planning Authority. The report shall include results of sampling and monitoring carried out in accordance with the approved verification plan to demonstrate that the site remediation criteria have been met. It shall also include any plan (a "long-term monitoring and maintenance plan") for longer-term monitoring of pollutant linkages, maintenance and arrangements for contingency action, as identified in the verification plan. The long-term monitoring and maintenance plan shall be implemented as approved.

1.4 Scope of this report

- 1.4.1 This Validation Report details the measures adopted to mitigate the risks associated with land gas and soil contamination during the construction works together with comments on any residual hazards and constraints associated with land gas and soil contamination. For ease of reference, this report also presents a brief description of the site conditions and ground investigation and the previously assessed risk associated with soil contamination. This report was prepared by Peter Brett Associates LLP (PBA) on the instruction of Porcelanosa UK Limited, the Client.
- 1.4.2 Guidance on the context of this report and any general limitations or constraints on its content and usage are given in a guidance note included as Section 6 of this report.

2 The Site

2.1 Site Description

- 2.1.1 The Site is situated off Rose Kiln Lane (A33) immediately to the west of the River Kennet and about 1.1 km south of Reading Town Centre. Historically, by the mid-1910s the Cooperative Jam Factory was constructed at the Site. By the mid-1970s the former jam factory was demolished and a warehouse used principally by a building merchant was constructed at the site. The warehouse was demolished in 2016.
- 2.1.2 The ground conditions revealed by the ground investigation typically comprise Made Ground to about 2.0 to 3.0 m depth underlain by Alluvium, Valley Gravel Deposits and White Chalk to an investigated depth of about 25 m below ground level. Groundwater was found to be between 2.0 and 3.0 m below ground level

2.2 Proposed Development

- 2.2.1 The current proposal is for a construction of a showroom including a small warehouse within the same building, and associated access road, car parking areas, unloading area and limited soft landscaping.

2.3 Geoenvironmental Risk Assessment

- 2.3.1 An interpretive report prepared by Peter Brett Associates was prepared which presented the findings of both a Phase1 desk study and subsequent Phase 2 ground investigation (PBA 2016a). The factual reporting of the Ground Investigation was undertaken by Geotechnical Engineering Limited (GEL 2015).
- 2.3.2 The ground investigation found that the measured concentrations of potential contaminants in the soils were below the assessment values appropriate for a commercial/industrial land use.
- 2.3.3 The measured concentrations of ground gases indicate slightly elevated concentration of carbon dioxide and methane and corresponding depleted oxygen concentrations. Gas flow was not detected. It was expected that the elevated concentrations were associated with the biodegradation of organic matter noted within the Alluvium or the Made Ground.
- 2.3.4 Using the procedure for classifying gassing sites proposed by BS 8485 (2015), the site was classified as Characteristic Situation 2 (CS2). For Characteristic Situation 2 basic gas mitigation measures were required to protect buildings and their occupiers from potential hazardous ground gasses.

3 Remediation Strategy

3.1 Required Remediation Measures

- 3.1.1 The PBA 2016a geoenvironmental risk assessment indicated that any potential contaminants in the ground or groundwater did not by themselves represent an unacceptable risk to human health, controlled waters or ecology and wildlife, associated with the proposed redevelopment.
- 3.1.2 As such, the required mitigation measures were limited to those related to:
- i) The risks to site workers associated with ingestion, inhalation or prolonged skin contact of contaminated material during the construction works.
 - ii) The risks to site workers and future site users associated with inhalation of hazardous ground gases.
- 3.1.3 In addition, mitigation measures may have been required should other sources of contamination be encountered during the site clearance or ground works that were not identified by the ground investigation works.

3.2 Gas Protection

- 3.2.1 As described in the Phase 2 Ground Condition Assessment (PBA, 2016a), using the procedure for classifying gassing sites given in BS 8485 (2007), the Site was classified as Characteristic Situation 2.
- 3.2.2 For Characteristic Situation 2 (CS2), BS 8485 (2015) advises that gas mitigation measures are required to protect buildings and their occupiers from potential hazardous ground gasses. Considering the retail, restaurant, office and other non-residential use of Building 2, BS 8485 (2007) gives a guidance score for the required gas protection of 2.
- 3.2.3 In accordance with the BS 8485 guidance typical gas protection measures for CS2 comprise a combination of at least two of the following measures:
- i) structural barrier in the form of a floor slab;
 - ii) ventilation measures; and
 - iii) gas resistant membrane.

3.3 Remediation Verification Plan

- 3.3.1 As described in Section 1.2.3 above, to demonstrate compliance with the Remediation Strategy, a Remediation Validation Plan was established by PBA (PBA 2016b) presenting the details of the data required to be collected to demonstrate that ensure that the Site was suitable for its proposed new use.
- 3.3.2 In addition to the PBA 2016b Verification plan, GeoShield Ltd prepared a Gas Protection Implementation Verification Plan. A copy of this is included in [Appendix B](#).

4 Works Verification

4.1 Contaminated Soils Remediation

Hazardous Materials

- 4.1.1 No potentially hazardous materials, for example asbestos, remaining from any buildings previously demolished were found to be present in the soils on the site and, hence, no specific additional methods of working or mitigation measures were required to protect site workers or groundwater.

Undetected Suspect Materials

- 4.1.2 No previously undetected suspect materials were encountered during the ground works and, hence no specific methods of working and mitigation measures were required to protect site workers or groundwater.
- 4.1.3 A statement by the Demolition Contractor (J Mould Reading Ltd) on the absence of contaminated materials is presented in [Appendix C](#).

Excavated Materials

- 4.1.4 All concrete arisings were excavated and transported to the stockpiles within the site for storage prior to re-use in subsequent phases of the proposed development. The excavated materials were tested for the presence of asbestos. Asbestos was not identified within the tested materials.
- 4.1.5 Testing certificates record the absence of asbestos in the stockpiles materials is presented in [Appendix D](#).

4.2 Gas protection Measures

- 4.2.1 The gas protection measures installed to the development comprised a gas resistant membrane, which was designed and installed by GeoShield Limited on behalf of Chalcroft Limited.
- 4.2.2 The design of the gas protection measures is presented in [Appendix E](#).
- 4.2.3 A validation report prepared to record the installation and validation of gas protection measured as installed is presented in [Appendix F](#). This confirms that the installation met the requirements of BS8485 and was verified in accordance with CIRIA 735 “Good practice on the testing and verification of protection systems for buildings against hazardous ground gases”.

5 Residual Hazards and Constraints

5.1 Residual Hazards

- 5.1.1 Given that no hazardous or undetected suspect materials were encountered in the soil on the site, and that adequate ventilation has been provided to mitigate the assessed risk with regard to potentially hazardous ground gases, any potential contaminants and hazardous ground gases do not by themselves represent an unacceptable risk to future site users.

5.2 Constraints

- 5.2.1 It is concluded that the absence of significant residual hazards associated with ground contamination have not been observed with respect to soil contamination and as such, a long-term monitoring and maintenance plan is not required.
- 5.2.2 It should be recognised however that Gas Protection Measures have been included within the built development and details of such should be included within the Health and Safety file for the built development recording the constructional elements.
- 5.2.3 Any remedial works or structural alterations required in the future will be required so that the integrity of such measures are maintained and such remedial works undertaken to reinstate the level of protection currently installed.

6 Essential Guidance for Report Readers

This report has been prepared within an agreed timeframe and to an agreed budget that will necessarily apply some constraints on its content and usage. The remarks below are presented to assist the reader in understanding the context of this report and any general limitations or constraints. If there are any specific limitations and constraints, they are described in the report text.

1. The opinions and recommendations expressed in this report are based on statute, guidance, and appropriate practice current at the date of its preparation. Peter Brett Associates LLP (PBA) does not accept any liability whatsoever for the consequences of any future legislative changes or the release of subsequent guidance documentation, etc. Such changes may render some of the opinions and advice in this report inappropriate or incorrect and we will be pleased to advise if any report requires revision due to changing circumstances, especially those over one-year-old. Following delivery of any report PBA has no obligation to advise the Client or any other party of such changes or their repercussions.
2. Some of the conclusions in this report may be based on third party data. No guarantee can be given for the accuracy or completeness of any of the third-party data used. Historical maps and aerial photographs provide a “snap shot” in time about conditions or activities at the site and cannot be relied upon as indicators of any events or activities that may have taken place at other times.
3. The conclusions and recommendations made in this report and the opinions expressed are based on the information reviewed and/or the ground conditions encountered in exploratory holes and the results of any field or laboratory testing undertaken. There may be ground conditions at the site that have not been disclosed by the information reviewed or by the investigative work undertaken. Such undisclosed conditions cannot be taken into account in any analysis and reporting.
4. Unless specifically stated to the contrary, this report does not purport to be a “Geotechnical Design Report” as defined in Clause 2.8 of Eurocode 7 (Geotechnical Design BS EN 1997-1:2004). Some of the data contained herein and used to support any geotechnical assessment presented in this report may be historical or for other reasons not fully compliant with the requirements of that code.
5. It should be noted that groundwater levels, groundwater chemistry, surface water levels, surface water chemistry, soil gas concentrations and soil gas flow rates can vary due to seasonal, climatic, tidal and man-made effects.
6. If the report indicates that asbestos has been identified within the ground, any work that involves, or is likely to involve, contact with asbestos must be undertaken in accordance with the Control of Asbestos Regulations 2012, particularly in regard to risk assessment, licencing and training. Risk assessment should be carried out prior to any activities that could lead to the disturbance of asbestos materials, either buried or on the ground surface and should include appropriate mitigation measures, such as damping down to prevent the spread of asbestos, air monitoring and minimum PPE and/or RPE requirements for the work proposed.
7. This report has been written for the sole use of the Client stated at the front of the report in relation to a specific development or scheme. The conclusions and recommendations presented herein are only relevant to the scheme or the phase of project under consideration. This report shall not be relied upon or transferred to any other party without the express written authorisation of PBA. Any such party relies upon the report at its own risk.
8. The interpretation carried out in this report is based on scientific and engineering appraisal carried out by suitably experienced and qualified technical consultants based on the scope of our engagement. We have not taken into account the perceptions of, for example, banks,

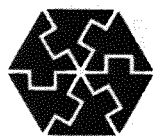
insurers, other funders, lay people, etc, unless the report has been prepared specifically for that purpose. Advice from other specialists may be required such as the legal, planning and architecture professions, whether specifically recommended in our report or not.

- 9 Public or legal consultations or enquiries, or consultation with any Regulatory Bodies (such as the Environment Agency, Natural England or Local Authority) have taken place only as part of this work where specifically stated.

7 References

- BS 8485 (2015) The code of practice for the design of protective measures for methane and carbon dioxide ground gases for new buildings. British Standards Institution, London.
- CIRIA 735 Good practice on the testing and verification of protection systems for buildings against hazardous ground gases. CIRIA 2014
- GEL (2015) 21 Rose Kiln Lane, Reading. Factual Report on Ground Investigation. Report Reference No. 29970. Geotechnical Engineering Limited, Gloucester.
- PBA (2016a) Phase 1 and 2 Ground Condition Assessment, Proposed Retail Showroom, 21 Rose Kiln Lane, Reading. Report 31363/3501/R001/rev0a, Peter Brett Associates, Reading, Berks.
- PBA (2016b) Verification Plan, Proposed Retail Showroom, 21 Rose Kiln Lane, Reading. Report 31363/3501/R002/rev0, Peter Brett Associates, Reading, Berks.

Appendix A RBC Planning Decision Notice



Reading

Borough Council

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**TOWN AND COUNTRY PLANNING ACT 1990
PLANNING AND COMPENSATION ACT 1991
THE TOWN & COUNTRY PLANNING
(DEVELOPMENT MANAGEMENT PROCEDURE) ORDER 2010**

APPLICATION FOR FULL PLANNING PERMISSION

To: Mr Jon Bishop
Caversham Bridge House
Waterman Place
Reading, Berkshire
RG1 8DN

Application No: 140542
Application type: Full Planning Approval

Applicant: Mr Juan Bodi

READING BOROUGH COUNCIL as local planning authority **GRANT FULL** planning permission for the following development in accordance with the plans and supporting information submitted in connection with this application.

Proposal: Demolition of existing warehouse and erection of a new retail warehouse (use class A1) with associated storage, car parking and landscaping

At: 21 Rose Kiln Lane Reading RG2 0LE

Subject to such conditions and for such reasons as may be attached

**OTHER STATUTORY CONSENTS MAY BE REQUIRED
PLEASE READ THE NOTES ISSUED WITH THIS DECISION NOTICE**

Date: 2 July 2014

Director of Environment
& Neighbourhood Services

Application At: 21 Rose Kiln Lane Reading RG2 0LE

Application No: 140542

Application type: Full Planning Approval

CONDITIONS & REASONS

1. The development to which this permission relates must be begun not later than the expiration of three years beginning with the date on which the permission was granted.
Reason: to prevent an accumulation of unimplemented planning permissions, and in accordance with Section 91 of the Town & Country Planning Act 1990 as amended by the Planning and Compulsory Purchase Act 2004.

2. The development hereby permitted shall not be carried out except in complete accordance with the details shown on the following submitted drawings:

HYA 13035(P)000 - LOCATION PLAN RECD 14/04/2014

HYA 13035(P)101 - PROPOSED SITE PLAN RECD 14/04/2014

HYA 13035(P)102 - PROPOSED ROOF PLAN RECD 14/04/2014

HYA 13035(P)104 - PROPOSED ELEVATIONS RECD 14/04/2014

HYA 13035(P)105 - PROPOSED ELEVATIONS RECD 14/04/2014 29603/3003/01 REV A - LANDSCAPE STRATEGY RECD 14/04/2014

Reason: For the avoidance of doubt and in the interests of proper planning.

3. No development shall commence until details of the materials to be used in the construction of the external surfaces of the development have been submitted to and approved in writing by the local planning authority. The development shall be carried out in accordance with the approved details.

Reason: In the interests of ensuring the acceptable visual appearance of the buildings and area.

LDF Core Strategy Policy CS7 (Design and the Public Realm)

4. No works in relation to demolition shall take place until a plan showing the position and specifications of tree protection measures during demolition and construction has been submitted to and approved in writing by the Local Planning Authority. Thereafter the tree protection measures shall be implemented prior to the commencement of any construction work and retained until completion of the development.

Reason: In the interests of ensuring that proper protection is given to trees on site.

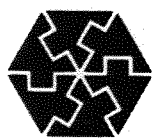
LDF Core Strategy Policy CS38 (Trees, Hedges and Woodlands)

5. Notwithstanding the approved plans, no development shall take place until full details of both hard and soft landscaping have been submitted to and approved in writing by the local planning authority. The submitted details shall include:

Date: 2 July 2014



Director of Environment
& Neighbourhood Services



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(a) proposed finished ground levels or contours; means of enclosure; car parking layouts; other vehicle and pedestrian access and circulation areas, hard surfacing materials, structures and ancillary objects (refuse bins, lighting columns etc); and
(b) proposed and existing functional services above and below ground (e.g drainage, power, communications cables, pipelines etc. indicating lines, manholes etc); and
(c) planting plans; tree pit details; a timetable for implementation; written specifications (including cultivation and other operations associated with plant and grass establishment); schedules of plants, noting species, plant sizes and proposed numbers/planting densities where appropriate.

(d) details of maintenance for 5 years following planting;

(e) ecological enhancement, including:

- The provision of a mixed native hedgerows in an appropriate location
- Details of sustainable drainage and irrigation systems such as permeable hard surfaces, rain gardens, and temporary pools and swales
- Amphibian friendly kerbs and gulley pots
- Biodiversity enhancements, including integral bird nesting and bat roosting opportunities on trees and on and around the new buildings

Reason: in the interests of the visual amenities of the area.

LDF Core Strategy Policy CS38 (Trees, Hedges and Woodlands)

6. The hard and soft landscaping works shall be carried out in accordance with the approved details. The works shall be carried out before any of the development is occupied or in accordance with a timescale which has been agreed in writing with the local planning authority.

Reason: in the interests of the visual amenities of the area.

LDF Core Strategy Policy CS38 (Trees, Hedges and Woodlands)

7. Any trees or plants which within a period of 5 years from the completion of the development die, are removed or become seriously damaged or diseased shall be replaced in the next planting season with others of a similar size and species, unless the local planning authority gives written approval to any variation.

Reason: in the interests of the visual amenities of the area.

LDF Core Strategy Policy CS38 (Trees, Hedges and Woodlands)

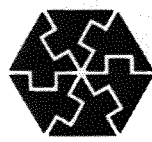
8. Notwithstanding the approved plans and details, no development shall take place until Arboricultural Method Statement for all works relating to demolition and construction within the RPA's of retained trees, and including a schedule of any tree works required and a timetable of arboricultural supervision, has been submitted to and approved in writing by the Local Planning Authority. Thereafter the development shall be carried out in accordance with the Arboricultural Method Statement.

Reason: In the interests of ensuring that proper protection is given to trees on site.

LDF Core Strategy Policy CS38 (Trees, Hedges and Woodlands)

Director of Environment
& Neighbourhood Services

Date: 2 July 2014



9. Notwithstanding the approved plans, no development shall take place until there has been submitted to and approved in writing by the local planning authority a plan indicating the positions, design, materials and type of boundary treatment to be erected. The boundary treatment shall be completed, in accordance with the approved plan, before the development is occupied or in accordance with a timetable agreed in writing with the local planning authority.

Reason: in the interests of the visual amenities of the area.

LDF Core Strategy Policy CS7 (Design and the Public Realm)

10. Notwithstanding the approved plans and details, no external lighting shall be installed on site until plans showing the type of light appliance, the height and position of fitting, illumination levels and light spillage including an isolux contour map showing light spillage to 1 lux both vertically and horizontally over the adjacent River Kennet have been submitted to and approved in writing by the Local Planning Authority. The lighting approved shall be installed and shall be maintained in accordance with the approved details.

Reason: In the interests of ensuring that the development provides adequate mitigation, and enhances its value, to wildlife.

LDF Core Strategy Policy CS36 (Biodiversity and Geology)

11. Should the warehouse not be demolished by June 2016 an updated bat survey is to be undertaken and a report detailing the results of the survey and any mitigation and compensatory measures is to be submitted to and approved in writing by the local planning authority prior to commencement of demolition of the building.

Reason: In the interests of ensuring that the development provides adequate mitigation, and enhances its value, to wildlife.

LDF Core Strategy Policy CS36 (Biodiversity and Geology)

12. No development of the site shall commence until the access has been constructed in accordance with the approved drawing and in compliance with the requirements of the Local Planning Authority for work carried out within the public highway.

Reason: In the interests of road safety.

LDF Sites and Detailed Policies Document Policy DM12 (Access, Traffic and Highway-Related Matters)

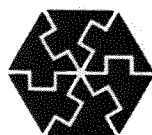
13. No building shall be occupied until vehicle parking space has been provided in accordance with the approved plan. The space shall thereafter be kept available for parking at all times.

Reason: In the interests of road safety.

LDF Sites and Detailed Policies Document Policy DM12 (Access, Traffic and Highway-Related Matters)

Date: 2 July 2014

Director of Environment
& Neighbourhood Services



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14. No development shall take place, including any works of demolition, until a Construction Method Statement has been submitted and approved in writing by the local planning authority to provide for:

- (A) The parking of vehicles and site operatives and visitors.
- (B) Loading and unloading of plant and materials used in constructing the development.
- (C) Storage of plant and materials used in constructing the development.
- (D) The erection and maintenance of security hoarding /scaffolding if required.
- (E) Wheel washing facilities
- (F) Measures on site to control the deposition of dirt / mud on surrounding roads during construction.
- (G) Footpath Closures /Road Closures needed during construction
- (H) Traffic Management needed during construction.
- (I) Times, routes and means of access into and from the site for construction traffic and delivery vehicles (including the removal of waste from the site and methods of preventing deposition of materials on the public highway).

The approved Construction Method Statement shall be adhered to throughout the development process unless agreed otherwise in writing by the Local Planning Authority.

Reason: In the interests of protecting the amenity of local land uses, the character of the area and highway safety.

LDF Core Strategy Policy CS34 (Pollution and Water Resources)

LDF Sites and Detailed Policies Document Policy DM12 (Access, Traffic and Highway-Related Matters)

15. No building shall be occupied until all the visibility splays shown on the approved drawings have been provided. All areas shall thereafter be kept free of all obstructions to visibility over a height of 0.6 metres above the carriageway level.

Reason: In the interests of road safety.

LDF Sites and Detailed Policies Document Policy DM12 (Access, Traffic and Highway-Related Matters)

16. Secure, covered and lockable bicycle storage spaces shall be provided and equipped with secure Sheffield cycle stands in accordance with a layout to be submitted to and approved by the Local Planning Authority before occupation of the dwellings to which they relate.

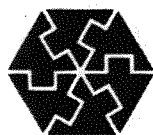
Reason: To ensure adequate cycle provision and to encourage travel by sustainable alternatives to driving a motor car in accordance with the Local Planning Authority's approved transport policies.

LDF Core Strategy Policy CS24 (Car/Cycle Parking)

LDF Sites and Detailed Policies Document Policy DM12 (Access, Traffic and Highway-Related Matters)

Date: 2 July 2014

Director of Environment
& Neighbourhood Services



17. The development shall be carried out only in accordance with the approved BREEAM Assessment submitted with the application, showing a targeted rating of 65.6%, unless otherwise agreed in writing by the Local Planning Authority, and before the building is occupied, a post-construction review shall be carried out by a licensed BREEAM assessor which shall confirm that the building meets the approved standard. Reason: To ensure that the development is carried out in accordance with sustainable building standards.

LDF Core Strategy Policy CS1 (Sustainable Construction and Design) SPD Sustainable Design and Construction

18. The development permitted by this planning permission shall only be carried out in accordance with the approved Flood Risk Assessment (FRA) produced by Peter Brett Ref 29603 rev Final dated April 2014 and the following mitigation measures detailed within the FRA:

- a. Limiting the surface discharge to the River Kennet to 5l/s utilizing suitable sustainable drainage techniques
- b. Finished floor levels are set at least 300mm above the 1 in 100 plus climate change flood levels
- c. Provide at least an 8m easement between the development (any structures) and the top of bank of the River Kennet

The mitigation measures shall be fully implemented prior to occupation and subsequently in accordance with the timing / phasing arrangements embodied within the scheme, or within any other period as may subsequently be agreed, in writing, by the Local Planning Authority. Reason: To prevent flooding by ensuring the satisfactory storage

of/disposal of surface water from the site.

LDF Core Strategy Policy CS35 (Flooding)

19. No development shall take place until a detailed land gas site investigation has been carried out by a competent person to fully and effectively characterise the nature and extent of land gas and its implications. The method and extent of this site investigation shall be agreed with the Local Planning Authority prior to commencement of the work and shall then proceed in strict accordance with the measures approved.

Reason: To ensure the development is suitable for its end use and the wider environment and does not create undue risks to occupiers of the site or surrounding areas.

LDF Core Strategy Policy CS34 (Pollution and Water Resources)

20. No development shall take place until a scheme showing how the development is to be protected against the possibility of land gas has been submitted to and approved in writing by the Local Planning Authority. The scheme as approved shall be fully implemented and completed before the development is first occupied and those measures incorporated into the development shall thereafter be retained unless the Local Planning Authority agrees otherwise in writing.

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Reason: To ensure the development is suitable for its end use and the wider environment and does not create undue risks to occupiers of the site or surrounding areas.

LDF Core Strategy Policy CS34 (Pollution and Water Resources)

21. The land gas remediation scheme shall be implemented in accordance with the approved timetable of works. A validation report (that demonstrates the effectiveness of the remediation carried out) must be submitted to and approved by the Local Planning Authority prior to any part of the accommodation hereby approved is occupied, unless the Local Planning Authority otherwise agrees in writing.

Reason: To ensure the development is suitable for its end use and the wider environment and does not create undue risks to occupiers of the site or surrounding areas.

LDF Core Strategy Policy CS34 (Pollution and Water Resources)

22. No development approved by this planning permission shall take place until a remediation strategy that includes the following components to deal with the risks associated with contamination of the site shall each be submitted to and approved, in writing, by the local planning authority:

- a. A preliminary risk assessment which has identified:
 - all previous uses - potential contaminants associated with those uses - a conceptual model of the site indicating sources, pathways and receptors - potentially unacceptable risks arising from contamination at the site.
- b. A site investigation scheme, based on (1) to provide information for a detailed assessment of the risk to all receptors that may be affected, including those off site.
- c. The results of the site investigation and the detailed risk assessment referred to in (2) and, based on these, an options appraisal and remediation strategy giving full details of the remediation measures required and how they are to be undertaken.
- d. A verification plan providing details of the data that will be collected in order to demonstrate that the works set out in the remediation strategy in (3) are complete and identifying any requirements for longer-term monitoring of pollutant linkages, maintenance and arrangements for contingency action.

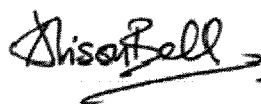
Any changes to these components require the express written consent of the local planning authority. The scheme shall be implemented as approved.

Reason: To ensure the development is suitable for its end use and the wider environment and does not create undue risks to occupiers of the site or surrounding areas.

LDF Core Strategy Policy CS34 (Pollution and Water Resources)

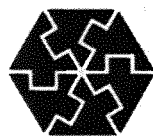
23. No occupation of any part of the permitted development shall take place until a verification report demonstrating completion of works set out in the approved remediation strategy and the effectiveness of the remediation shall be submitted to and approved, in writing, by the local planning authority. The report shall include results of sampling and monitoring carried out in accordance with the approved

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verification plan to demonstrate that the site remediation criteria have been met. It shall also include any plan (a "long-term monitoring and maintenance plan") for longer-term monitoring of pollutant linkages, maintenance and arrangements for contingency action, as identified in the verification plan. The long-term monitoring and maintenance plan shall be implemented as approved.

Reason: To ensure the development is suitable for its end use and the wider environment and does not create undue risks to occupiers of the site or surrounding areas.

LDF Core Strategy Policy CS34 (Pollution and Water Resources)

24. The development hereby permitted shall not be commenced until such time as a scheme to dispose of surface water that ensures that soakaways are not constructed into contaminated land has been submitted to, and approved in writing by, the local planning authority. The scheme shall be implemented as approved.

Reason: To ensure the development is suitable for its end use and the wider environment and does not create undue risks to occupiers of the site or surrounding areas.

LDF Core Strategy Policy CS34 (Pollution and Water Resources)

25. No later than 3 months prior to implementation of the development, the developer shall submit to the Council for approval an Employment and Skills Plan (ESP) for the development which identifies and promotes, in collaboration with the Reading UK CIC's Skills for Business campaign, employment opportunities generated by the proposed development. The ESP's shall include requirements for training and apprenticeships and target Reading Borough based workforces (although will not specifically exclude workforces from outside that area) for both the construction phase(s) of each phase of the proposed development and for the end user(s) of each phase. The developer or occupier shall implement the ESP's as approved. The development shall not commence until the ESP for the construction phase(s) is approved in writing by the LPA. The development shall not be occupied until the ESP(s) for the end user phase is approved in writing by the LPA.

Reason: In order to ensure the development contributes towards the range of employment, skills and training measures to mitigate the impacts of the development.
SPD Employment Skills and Training

26. The site shall be used for the sale of furniture and furnishings, tiles, or kitchen and bathroom products and for no other purpose (including any other purpose in Class A1 of the Schedule to the Town and Country Planning (Use Classes) Order 1987 (as amended by the Town and Country Planning (Use Classes) (Amendment) (England) Order 2005, (or in any provisions equivalent to that class in any statutory instrument revoking or re-enacting that Order with or without modification).

Reason: In order to exercise control over the range of goods sold from the building hereby permitted in the interests of the vitality and viability of existing centres.

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LDF Core Strategy Policy CS25 (Location and Scale of Retail, Leisure and Culture Development)

LDF Core Strategy Policy CS24 (Car/Cycle Parking)

LDF Sites and Detailed Policies Document Policy DM12 (Access, Traffic and Highway-Related Matters)

27. No mezzanine or other form of internal floor to create a first floor level shall be constructed in the development hereby permitted. Reason: In order to exercise control over the expansion/intensification of use of the building hereby permitted.

LDF Core Strategy Policy CS24 (Car/Cycle Parking)

LDF Sites and Detailed Policies Document Policy DM12 (Access, Traffic and Highway-Related Matters)

INFORMATIVES

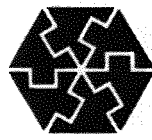
1. The Council has acted positively and proactively over the course of the application to address the issues raised by the proposal, including impact upon bats, to ensure that the application could be recommended for approval by officers. The Council has also acted positively and proactively by presenting the application to Committee at the earliest opportunity.
2. The Council's Transport Development Control Section should be contacted at Civic Centre, Reading, RG1 7TD telephone: 0118 937 3949, to agree the access construction details and to grant an agreement before any work is carried out within the highway. A formal application should be made allowing at least 8 week's notice to obtain details of underground services on the applicants' behalf.
3. The attention of the applicant is drawn to Section 59 of the Highways Act 1980, which enables the Highway Authority to recover expenses due to damage caused by extraordinary traffic.
4. Any works affecting the highway shall be in accordance with Reading Borough's Council's document 'Guidance Notes for Activities on the Public Highway within the Borough of Reading'. The applicant should be made aware that compliance with this document is mandatory and licences to work on the highway will only be issued if the requirements contained within it are met. A copy can be obtained at <http://www.reading.gov.uk/ltp/General.asp?id=SX9452-A782F664> (within the Transport Strategy area of the Transport Section on the Reading Borough Web Site). To comply with this document, especially with regards Construction Method Statements,

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Temporary Traffic Regulation Orders may be required and all costs associated with these will be borne by the applicant.

5. Building regulations approval will be required for the development. Please contact the Council's Building Control section for further information: 0118 937 2449.

6. The developer's attention is drawn to the various requirements for the control of noise on construction sites laid down in the Control of Pollution Act 1974, in order to ensure that residents are not adversely affected by air pollution and noise during decommissioning and construction works.

7. There should be no burning of waste on the site.

8. All sewage or trade effluent should be discharged to the foul sewer if available subject to the approval of Thames Water Utilities or its sewerage agent

9. This planning permission does not grant advertisement consent for any advertisements which the applicant may wish to display.

Date: 2 July 2014

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& Neighbourhood Services

NOTES

APPEALS TO THE SECRETARY OF STATE

If you are aggrieved by the decision of the Council to refuse permission for the proposed development or to grant it subject to conditions, then you can appeal to the Secretary of State under section 78 of the Town and Country Planning Act 1990.

If this is a decision on a planning application relating to the same or substantially the same land and development as is already the subject of an enforcement notice, if you want to appeal against the Council's decision on the application you must do so within 28 days of the date of this notice.

If an enforcement notice is served relating to the same or substantially the same land and development as in your application and you want to appeal against the Council's decision on your application, you must do so within 28 days of the date of service of the enforcement notice, or within 6 months (or 12 weeks in the case of a householder appeal) of the date of this notice, whichever period expires earlier.

If the above circumstances do not apply, any appeal must be made within the following time limits.

If this is a householder application and you want to appeal against the Council's decision then you must do so within 12 weeks of the date of this notice. If this is an advertisement application and you want to appeal against your local planning authority's decision then you must do so within 8 weeks of the date of this notice. If you want to appeal against your local planning authority's decision for any other type of application (which is not a householder or advertisement application, or an application for a Certificate of Lawfulness) then you must do so within 6 months of the date of this notice.

The Secretary of State can allow a longer period for giving notice of an appeal, but he will not normally be prepared to use this power unless there are special circumstances which excuse the delay in giving notice of appeal. The Secretary of State need not consider an appeal if it seems to him that the local planning authority could not have granted planning permission for the proposed development or could not have granted it without the conditions they imposed, having regard to the statutory requirements, to the provisions of any development order and to any directions given under a development order. In practice, the Secretary of State does not refuse to consider appeals solely because the local planning authority based their decision on a direction given by him.

Appeals must be made using a form which you can get from the Planning Inspectorate at Temple Quay House, 2 The Square, Temple Quay, Bristol BS1 6PN, tel. 0303 444 5000, or online at www.planningportal.gov.uk/pcs.

Purchase Notices

If either the local planning authority or the Secretary of State refuses permission to develop land or grants it subject to conditions, the owner may claim that he can neither put the land to a reasonably beneficial use in its existing state nor render the land capable of a reasonably beneficial use by the carrying out of any development which has been or would be permitted. In these circumstances, the owner may serve a purchase notice on the Council in whose area the land is situated. This notice will require the Council to purchase his interest in the land in accordance with the provisions of Part VI of the Town and Country Planning Act 1990.

Street Naming & Numbering

You must contact Reading Borough Council to:

- Name or number a new development
- Name a new street
- Get addresses for flat conversions
- Name or rename an existing building

Otherwise the following may occur:

- You will not have an official address or postcode. When your property goes through the official process it may be given a different address and Postcode than you are currently using.
- You may have difficulty receiving mail
- You may have problems when buying goods or services such as utilities and telecommunications
- The emergency services may have difficulty locating you.
- You may have problems accessing Council services such as Education, Parking Services and Electoral Registration.

The Council is responsible for assigning house names and numbers and street names. It is also responsible for updating the National Land and Property Gazetteer (NLPG) which is a list of addresses which meet a common standard (BS7666) used throughout the country.

When a new address or change of address is requested, the Council contacts Royal Mail who check the address on behalf of the Emergency Services, assign a postcode and add it to their Postal Address File (PAF). The PAF list is used by many companies and services to check addresses, authenticate transactions and order goods, as well as deliver mail, so it is in your interest for your address to be on that list. Royal Mail will not create an address until requested to do so by the Council.

How to apply:

Email us using streetnamingnumbering@reading.gov.uk

Or telephone us on 0118 9373737

What we need to complete your request:

For new addresses or flat conversions:

- Site layout plan containing plot numbers
- Location plan - No bigger than A3 size (hard copy, PDF, JPEG or AutoCAD) showing the site boundary, including the new development, together with surrounding buildings for reference
- Anticipated completion and occupation dates

For change of address:

- You must be, or have authorisation from, the owner to request a change of address.
- Floor plan of the existing property
- Reason for change

Once created, the Council informs various bodies of your new address including the Emergency Services, Council Tax, Land Registry and utility companies as well as adding it to the National Land and Property Gazetteer.

Please be advised that companies and services using the PAF file only update the addresses monthly, quarterly or even less frequently, therefore it may take a while for your address to be listed in some places. It will, however, appear on the Royal Mail website within a few days once it has been added to the live address file.

Reading Borough Council has no control over the frequency by which other organisations update their address files.

**TOWN AND COUNTRY PLANNING ACT 1990
PLANNING AND COMPENSATION ACT 1991
THE TOWN & COUNTRY PLANNING
(DEVELOPMENT MANAGEMENT PROCEDURE) (ENGLAND) ORDER 2015**

APPLICATION FOR FULL PLANNING PERMISSION

To: Peter Brett Associates LLP
Caversham Bridge House
Waterman Place
Reading
RG1 8DN

Application No: 160403
Application type: Variation of Condition

Applicant: Porcelanosa UK Ltd

READING BOROUGH COUNCIL as Local Planning Authority **GRANT FULL** planning permission for the following development in accordance with the plans and supporting information submitted in connection with this application.

Proposal: Demolition of the existing warehouse and the erection of a new retail warehouse (use class A1) with associated storage, car parking and landscaping, at 21 Rose Kiln Lane, Reading, without complying with conditions 2 (Drawing Nos.), 3 (Materials), 5 & 9 (Landscaping & Boundary Treatment), 19, 20 & 22 (Site Investigation, Protection & Remediation Strategy), 24 (Surface Water) and 25 (Employment & Skills Plan) of Planning Permission 140542 (dated 2 July 2014) as Varied by Planning Permission 141471.

At: 21 Rose Kiln Lane Reading RG2 0LE

Subject to such conditions and for such reasons as may be attached

**OTHER STATUTORY CONSENTS MAY BE REQUIRED
PLEASE READ THE NOTES ISSUED WITH THIS DECISION NOTICE**

Date: 10 November 2016



Head of Planning, Development
& Regulatory Services

Application At: 21 Rose Kiln Lane Reading RG2 0LE

Application No: 160403

Application type: Variation of Condition

CONDITIONS & REASONS

AMENDED CONDITIONS

2. The development hereby permitted shall not be carried out except in complete accordance with the details shown on the following submitted drawings and in associated documents:

HYA 13035(P)000 - Location Plan Received on 14th April 2014 (under Ref. 140542 dated 2nd July 2014)

30639 (PL) 01 Rev B Existing Site Plan
30639 (PL) 05 Rev A Proposed Floor Plan
30639 (PL) 06 Rev A Proposed Roof Plan
30639 (PL) 03 Rev C Proposed Elevations Sheet 1
30639 (PL) 04 Rev C Proposed Elevations Sheet 2
30639 (P 31363/2001/004 T2 Proposed Surface Finishes and Kerbs
31363/2001/005 T2 Pavement Construction Details Sheet 1 of 2
31363/2001/006 T2 Pavement Construction Details Sheet 1 of 2
30639 (PL) 08 A External Details Sheet 1
31363/2001/001 T2 Topographical Survey
31363/2001/002 T2 Existing Utilities Layout
31363/2001/007 T2 Proposed Surface and Foul Drainage and Levels
Report on Ground Investigation
Phase 1 & 2 Ground Condition Assessment
Employment and Skills Plan
Received on 3rd March 2016

31363/2001/008 T2 Drainage Construction Details
Thames Water Asset Location Search
Surface Water Drainage Calculations
Received on 27th May 2016

L90-300 Rev N Detailed Planting Plan
39639 (02) 09 Rev B Boundary Treatment Plan
L90-301 Rev C Section Through Tree Pit
Received on 18th August 2016

30639 (PL) 02 Rev E Proposed Site Plan
Received on 22nd August 2016

Date: 10 November 2016



Head of Planning, Development
& Regulatory Services

Landscape Management Plan Rev C
31363/2001/003 T6 Proposed Utilities and Lighting Layout
Received on 5th October 2016

3. The development shall be carried out in accordance with the details of the materials to be used in the construction of the external surfaces of the development as detailed on the drawings submitted to and hereby approved by the Local Planning Authority.

Reason: In the interests of ensuring the acceptable visual appearance of the buildings and area. LDF Core Strategy Policy CS7 (Design and the Public Realm)

5. The development shall be carried out in accordance with the details of hard and soft landscaping submitted to and hereby approved by the local planning authority.

Reason: In the interests of the visual amenities of the area.

LDF Core Strategy Policy CS38 (Trees, Hedges and Woodlands)

9. The development shall be carried out in accordance with the positions, design, materials and type of boundary treatment to be erected submitted to and hereby approved by the Local Planning Authority before the development is occupied or in accordance with a timetable agreed in writing with the Local Planning Authority.

Reason: in the interests of the visual amenities of the area. LDF Core Strategy Policy CS7 (Design and the Public Realm)

19. The development shall be carried out in accordance with land gas site investigation and measures identified therein submitted to and approved by the Local Planning Authority

Reason: To ensure the development is suitable for its end use and the wider environment and does not create undue risks to occupiers of the site or surrounding areas. LDF Core Strategy Policy CS34 (Pollution and Water Resources).

20. The scheme submitted to and hereby approved by the Local Planning Authority showing how the development is to be protected against the possibility of land gas shall be fully implemented and completed before the development is first occupied and those measures incorporated into the development shall thereafter be retained unless the Local Planning Authority agrees otherwise in writing.

Reason: To ensure the development is suitable for its end use and the wider environment and does not create undue risks to occupiers of the site or surrounding areas. LDF Core Strategy Policy CS34 (Pollution and Water Resources)

22. The development shall be carried out in accordance with the remediation strategy to deal with the risks associated with contamination of the site submitted to and hereby approved by the Local Planning Authority. Any changes to these components require the express written consent of the local planning authority.



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& Regulatory Services

Reason: To ensure the development is suitable for its end use and the wider environment and does not create undue risks to occupiers of the site or surrounding areas. LDF Core Strategy Policy CS34 (Pollution and Water Resources)

24. The development shall be carried out in accordance with the scheme to dispose of surface water submitted to and hereby approved by Local Planning Authority.

Reason: To ensure the development is suitable for its end use and the wider environment and does not create undue risks to occupiers of the site or surrounding areas. LDF Core Strategy Policy CS34 (Pollution and Water Resources)

25. The developer shall implement the Employment and Skills Plan (ESP) for the development submitted to and hereby approved by the Local Planning Authority for both the construction phase(s) and for the end user(s) of each phase.

Reason: In order to ensure the development contributes towards the range of employment, skills and training measures to mitigate the impacts of the development. SPD Employment Skills and Training

ALL OTHER CONDITIONS OF PLANNING PERMISSION 140542 AS VARIED BY 141471 AND AMENDED BY 152413 APPLY TO THIS PERMISSION; VIZ:

1. The development to which this permission relates must be begun not later than 2nd July 2017.

Reason: to prevent an accumulation of unimplemented planning permissions, and in accordance with Section 91 of the Town & Country Planning Act 1990 as amended by the Planning and Compulsory Purchase Act 2004.

6. The hard and soft landscaping works shall be carried out in accordance with the approved details. The works shall be carried out before any of the development is occupied or in accordance with a timescale which has been agreed in writing with the local planning authority.

Reason: in the interests of the visual amenities of the area.

LDF Core Strategy Policy CS38 (Trees, Hedges and Woodlands)

7. Any trees or plants which within a period of 5 years from the completion of the development die, are removed or become seriously damaged or diseased shall be replaced in the next planting season with others of a similar size and species, unless the local planning authority gives written approval to any variation.

Reason: In the interests of the visual amenities of the area. LDF Core Strategy Policy CS38 (Trees, Hedges and Woodlands)

10. Notwithstanding the approved plans and details, no external lighting shall be installed on site until plans showing the type of light appliance, the height and position of fitting, illumination levels and light spillage including an isolux contour map showing



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& Regulatory Services

light spillage to 1 lux both vertically and horizontally over the adjacent River have been submitted to and approved in writing by the Local Planning Authority. The lighting approved shall be installed and shall be maintained in accordance with the approved details. Reason: In the interests of ensuring that the development provides adequate mitigation, and enhances its value, to wildlife. LDF Core Strategy Policy CS36 (Biodiversity and Geology)

11. See note 10 in “Informatives” below.

12. No development of the site shall commence until the access has been constructed in accordance with the approved drawing and in compliance with the requirements of the Local Planning Authority for work carried out within the public highway.

Reason: In the interests of road safety. LDF Sites and Detailed Policies Document Policy DM12 (Access, Traffic and Highway-Related Matters)

13. No building shall be occupied until vehicle parking space has been provided in accordance with the approved plan. The space shall thereafter be kept available for parking at all times.

Reason: In the interests of road safety. LDF Sites and Detailed Policies Document Policy DM12 (Access, Traffic and Highway-Related Matters)

15. No building shall be occupied until all the visibility splays shown on the approved drawings have been provided. All areas shall thereafter be kept free of all obstructions to visibility over a height of 0.6 metres above the carriageway level.

Reason: In the interests of road safety. LDF Sites and Detailed Policies Document Policy DM12 (Access, Traffic and Highway-Related Matters)

16. Secure, covered and lockable bicycle storage spaces shall be provided and equipped with secure Sheffield cycle stands in accordance with a layout to be submitted to and approved by the Local Planning Authority before occupation of any part of the permitted development.

Reason: To ensure adequate cycle provision and to encourage travel by sustainable alternatives to driving a motor car in accordance with the Local Planning Authority's approved transport policies. LDF Core Strategy Policy CS24 (Car/Cycle Parking)

LDF Sites and Detailed Policies Document Policy DM12 (Access, Traffic and Highway-Related Matters)

18. The development permitted by this planning permission shall only be carried out in accordance with the approved Flood Risk Assessment (FRA) produced by Peter Brett Ref 29603 rev Final dated April 2014 and the following mitigation measures detailed within the FRA:

a. Limiting the surface discharge to the River Kennet to 5l/s utilizing suitable sustainable drainage techniques

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Head of Planning, Development
& Regulatory Services

- b. Finished floor levels are set at least 300mm above the 1 in 100 plus climate change flood levels
- c. Provide at least an 8m easement between the development (any structures) and the top of bank of the River Kennet

The mitigation measures shall be fully implemented prior to occupation and subsequently in accordance with the timing / phasing arrangements embodied within the scheme, or within any other period as may subsequently be agreed, in writing, by the Local Planning Authority.

Reason: To prevent flooding by ensuring the satisfactory storage of/disposal of surface water from the site. LDF Core Strategy Policy CS35 (Flooding).

21. The land gas remediation scheme shall be implemented in accordance with the approved timetable of works. A validation report (that demonstrates the effectiveness of the remediation carried out) must be submitted to and approved by the Local Planning Authority prior to any part of the accommodation hereby approved is occupied, unless the Local Planning Authority otherwise agrees in writing.

Reason: To ensure the development is suitable for its end use and the wider environment and does not create undue risks to occupiers of the site or surrounding areas. LDF Core Strategy Policy CS34 (Pollution and Water Resources).

23. No occupation of any part of the permitted development shall take place until a verification report demonstrating completion of works set out in the approved remediation strategy and the effectiveness of the remediation shall be submitted to and approved, in writing, by the local planning authority. The report shall include results of sampling and monitoring carried out in accordance with the approved verification plan to demonstrate that the site remediation criteria have been met. It shall also include any plan (a "long-term monitoring and maintenance plan") for longer-term monitoring of pollutant linkages, maintenance and arrangements for contingency action, as identified in the verification plan. The long-term monitoring and maintenance plan shall be implemented as approved.

Reason: To ensure the development is suitable for its end use and the wider environment and does not create undue risks to occupiers of the site or surrounding areas. LDF Core Strategy Policy CS34 (Pollution and Water Resources)

26. The site shall be used for the sale of furniture and furnishings, tiles, or kitchen and bathroom products and for no other purpose (including any other purpose in Class A1 of the Schedule to the Town and Country Planning (Use Classes) Order 1987 (as amended by the Town and Country Planning (Use Classes) (Amendment) (England) Order 2005, (or in any provisions equivalent to that class in any statutory instrument revoking or re-enacting that Order with or without modification).

Reason: In order to exercise control over the range of goods sold from the building hereby permitted in the interests of the vitality and viability of existing centres.



Date: 10 November 2016

Head of Planning, Development
& Regulatory Services

LDF Core Strategy Policy CS25 (Location and Scale of Retail, Leisure and Culture Development) & Policy CS24 (Car/Cycle Parking)
LDF Sites and Detailed Policies Document Policy DM12 (Access, Traffic and Highway-Related Matters)

27. No mezzanine or other form of internal floor to create a first floor level shall be constructed in the development hereby permitted. Reason: In order to exercise control over the expansion/intensification of use of the building hereby permitted. LDF Core Strategy Policy CS24 (Car/Cycle Parking)

INFORMATIVES

1. The Council has acted positively and proactively over the course of the application to address the issues raised by the proposal, to ensure that the application could be recommended for approval by officers.
2. The Council's Transport Development Control Section should be contacted at Civic Centre, Reading, RG1 7TD telephone: 0118 937 3949, to agree the access construction details and to grant an agreement before any work is carried out within the highway. A formal application should be made allowing at least 8 week's notice to obtain details of underground services on the applicants' behalf.
3. The attention of the applicant is drawn to Section 59 of the Highways Act 1980, which enables the Highway Authority to recover expenses due to damage caused by extraordinary traffic.
4. Any works affecting the highway shall be in accordance with Reading Borough's Council's document 'Guidance Notes for Activities on the Public Highway within the Borough of Reading'. The applicant should be made aware that compliance with this document is mandatory and licences to work on the highway will only be issued if the requirements contained within it are met. A copy can be obtained at <http://www.reading.gov.uk/ltp/General.asp?id= SX9452-A782F664> (within the Transport Strategy area of the Transport Section on the Reading Borough Web Site). To comply with this document, especially with regards Construction Method Statements, Temporary Traffic Regulation Orders may be required and all costs associated with these will be borne by the applicant.
5. Building Regulations approval will be required for the development. Please contact the Council's Building Control section for further information: 0118 937 2449.
6. The developer's attention is drawn to the various requirements for the control of noise on construction sites laid down in the Control of Pollution Act 1974, in order to



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ensure that residents are not adversely affected by air pollution and noise during decommissioning and construction works.

7. There should be no burning of waste on the site.

8. All sewage or trade effluent should be discharged to the foul sewer if available subject to the approval of Thames Water Utilities or its sewerage agent.

9. This planning permission does not grant Advertisement Consent for any advertisements which the applicant may wish to display.

10. You are advised that following confirmation by e-mail (Peter Brett Associates, dated 2nd November 2016) that the warehouse was demolished in its entirety prior to 30th June 2016, Condition 11 of 141471 "Should the warehouse not be demolished by June 2016 an updated bat survey is to be undertaken and a report detailing the results of the survey and any mitigation and compensatory measures is to be submitted to and approved in writing by the local planning authority prior to commencement of demolition of the building" is no longer relevant and thus not included.

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Head of Planning, Development
& Regulatory Services

NOTES

APPEALS TO THE SECRETARY OF STATE

If you are aggrieved by the decision of the Council to refuse permission for the proposed development or to grant it subject to conditions, then you can appeal to the Secretary of State under section 78 of the Town and Country Planning Act 1990.

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If an enforcement notice is served relating to the same or substantially the same land and development as in your application and you want to appeal against the Council's decision on your application, you must do so within 28 days of the date of service of the enforcement notice, or within 6 months (or 12 weeks in the case of a householder appeal) of the date of this notice, whichever period expires earlier.

If the above circumstances do not apply, any appeal must be made within the following time limits.

If this is a householder application and you want to appeal against the Council's decision then you must do so within 12 weeks of the date of this notice. If this is an advertisement application and you want to appeal against your local planning authority's decision then you must do so within 8 weeks of the date of this notice. If you want to appeal against your local planning authority's decision for any other type of application (which is not a householder or advertisement application, or an application for a Certificate of Lawfulness) then you must do so within 6 months of the date of this notice.

The Secretary of State can allow a longer period for giving notice of an appeal, but he will not normally be prepared to use this power unless there are special circumstances which excuse the delay in giving notice of appeal. The Secretary of State need not consider an appeal if it seems to him that the Local Planning Authority could not have granted planning permission for the proposed development or could not have granted it without the conditions they imposed, having regard to the statutory requirements, to the provisions of any development order and to any directions given under a development order. In practice, the Secretary of State does not refuse to consider appeals solely because the Local Planning Authority based their decision on a direction given by him.

Appeals must be made using a form which you can get from the Planning Inspectorate at Temple Quay House, 2 The Square, Temple Quay, Bristol BS1 6PN, tel. 0303 444 5000, or online at www.planningportal.gov.uk/pcs.

Purchase Notices

If either the Local Planning Authority or the Secretary of State refuses permission to develop land or grants it subject to conditions, the owner may claim that he can neither put the land to a reasonably beneficial use in its existing state nor render the land capable of a reasonably beneficial use by the carrying out of any development which has been or would be permitted. In these circumstances, the owner may serve a purchase notice on the Council in whose area the land is situated. This notice will require the Council to purchase his interest in the land in accordance with the provisions of Part VI of the Town and Country Planning Act 1990.

Street Naming & Numbering

You must contact Reading Borough Council to:

- Name or number a new development
- Name a new street
- Get addresses for flat conversions
- Name or rename an existing building

Otherwise the following may occur:

- You will not have an official address or postcode. When your property goes through the official process it may be given a different address and Postcode than you are currently using.
- You may have difficulty receiving mail
- You may have problems when buying goods or services such as utilities and telecommunications
- The emergency services may have difficulty locating you.
- You may have problems accessing Council services such as Education, Parking Services and Electoral Registration.

The Council is responsible for assigning house names and numbers and street names. It is also responsible for updating the National Land and Property Gazetteer (NLPG) which is a list of addresses which meet a common standard (BS7666) used throughout the country.

When a new address or change of address is requested, the Council contacts Royal Mail who check the address on behalf of the Emergency Services, assign a postcode and add it to their Postal Address File (PAF). The PAF list is used by many companies and services to check addresses, authenticate transactions and order goods, as well as deliver mail, so it is in your interest for your address to be on that list. Royal Mail will not create an address until requested to do so by the Council.

How to apply:

Email us using streetnamingnumbering@reading.gov.uk

Or telephone us on 0118 9373737

What we need to complete your request:

For new addresses or flat conversions:

- Site layout plan containing plot numbers
- Location plan - No bigger than A3 size (hard copy, PDF, JPEG or AutoCAD) showing the site boundary, including the new development, together with surrounding buildings for reference
- Anticipated completion and occupation dates

For change of address:

- You must be, or have authorisation from, the owner to request a change of address.
- Floor plan of the existing property
- Reason for change

Once created, the Council informs various bodies of your new address including the Emergency Services, Council Tax, Land Registry and utility companies as well as adding it to the National Land and Property Gazetteer.

Please be advised that companies and services using the PAF file only update the addresses monthly, quarterly or even less frequently, therefore it may take a while for your address to be listed in some places. It will, however, appear on the Royal Mail website within a few days once it has been added to the live address file.

Reading Borough Council has no control over the frequency by which other organisations update their address files.

Appendix B GeoShield Ltd Gas Protection Measures Verification Plan



GEOSHIELD Verification Plan



PROJECT REFERENCE: GEO1001700/KC/P

PROJECT: Porcelenosa: Kenwood Construction

PROJECT ADDRESS: 21 Rose Kiln Lane

Reading

RG1 6SP

SPECIFICATION: Membrane to BS8485 2015

Installed and Verified to CIRIA 735

Hydroprufe 9000

Hydroprufe 8000

Dual Tape

Girth Tape

Foil backed detailing tape

Verification Plan will not be legally valid until payment is made.



GEOSHIELD Verification Plan



SPECIFICATION cont:

Hydroprufe LG Liquid Gas Membrane

DRAWINGS ISSUED

31363/5002/003 C1 Foundations and ground floor plan

31363/5002/020 C2 Substructure Sections

365001 Rev A

365002 Rev A

365003 Rev A

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GEOSHIELD Verification Plan



SURVEYOR:

Paul Colbeck

VERIFICATION COMPANY:

GEOSHIELD LIMITED

Hoyle Mill Road

Kinsley

West Yorkshire

WF9 5JB

CONTACT NUMBER:

07462 546926

EMAIL ADDRESS:

paulcolbeck6@gmail.com

ORDER NUMBER:

TBC

PER VISIT: YES:

☐

NO:

☐

PROJECT: YES:



NO:

☐

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GEOSHIELD Verification Plan



SPECIFICATION

1 of 7

Premcrete

Metro House
Pepper Road
Leeds
West Yorkshire LS10 2RU
Tel: 0800 619 1619
email: sales@premcrete.com
website: www.premcrete.com



Agrément Certificate
12/4957
Product Sheet 1

PREMCRETE GAS RESISTANT DAMP-PROOF MEMBRANES

HYDROPRUFE 9000

This Agrément Certificate Product Sheet⁽¹⁾ relates to Hydroprufe 9000, for use as a LDPE gas barrier and damp-proof membrane in solid concrete ground floors not subject to hydrostatic pressure, to protect buildings against moisture, radon, methane and carbon dioxide from the ground.

(1) Hereinafter referred to as 'Certificate'

CERTIFICATION INCLUDES:

- factors relating to compliance with Building Regulations where applicable;
- factors relating to additional non-regulatory information where applicable;
- independently verified technical specification;
- assessment criteria and technical investigations;
- design considerations;
- installation guidance;
- regular surveillance of production;
- formal three-yearly review.



KEY FACTORS ASSESSED

Resistance to water and water vapour — the membrane provides an effective barrier to the passage of liquid water and water vapour from the ground (see section 6).

Resistance to underground gases — the membrane is capable of restricting the ingress of radon, methane and carbon dioxide gases into the building (see section 7).

Resistance to puncture — on smooth or blinded surfaces the membrane will accept without damage the limited foot traffic and loads associated with the installation of the system (see section 8).

Durability — under normal service conditions the membrane will remain effective against the ingress of water and water vapour, and will restrict the ingress of radon, methane and carbon dioxide during the lifetime of the concrete slab in which it is installed (see section 13).

The BBA has awarded this Certificate to the company named above for the product described herein. This product has been assessed by the BBA as being fit for its intended use provided it is installed, used and maintained as set out in this Certificate.

On behalf of the British Board of Agrément

Date of First issue: 11 January 2013

Simon Wroe
Head of Approvals — Materials

Greg Cooper
Chief Executive

The BBA is a UKAS accredited certification body — Number 1113. The schedule of the current scope of accreditation for product certification is available in pdf format via the UKAS link on the BBA website at www.bbacerts.co.uk

Readers are advised to check the validity and issue number of this Agrément Certificate by either referring to the BBA website or contacting the BBA direct

British Board of Agrément
Bucknalls Lane
Watford
Herts WD25 9BA

©2013

tel: 01923 665300
fax: 01923 665301
email: mail@bba-star.co.uk
website: www.bbacerts.co.uk

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GEOSHIELD Verification Plan



SPECIFICATION

1 of 2

CODE: LUXHP 1005
REVISION DATE: 31.07.15

Hydroprufe 8000

Gas Resistant Self-Adhesive Membrane

DESCRIPTION

HYDROPRUFE 8000 is a high performance, cold applied waterproof membrane, manufactured from an aluminium/polythene laminate coated on one surface with a layer of self-adhesive polymer modified bitumen.

ADVANTAGES

- Rapid and easy cold application
- Aluminium laminate provides methane and radon protection.
- Flexible and accommodating giving excellent bond to substrate.
- Non-hazardous and resistant to dilute acids and alkalis
- High performance protection against surface and ground water and soluble salts.
- Capable of resisting a 6 metre head of water when fully supported.
- Conforms to BS 8102:2009.

USES

HYDROPRUFE 8000 is used as a high performance self-adhesive waterproofing membrane for substructures where resistance against methane and radon gas is required. Such applications include the waterproofing of basements, underground car parks, water tanks, reservoirs etc.

PROCEDURE

Surface Preparation: The surface should be smooth and free from sharp projections and hollows. Cured concrete bases should be dry and swept free of dust and rubble. Internal and external angles require profiling prior to application.

Priming: Apply Hydroprufe Primer by roller, brush or spray (at a nominal rate of 8 M2 per litre) and allow to dry.

Application: The release paper should be removed for the first 500 mm of the roll and the membrane pressed firmly into position to ensure no air pockets are formed. Application of the roll is then completed by continuing to remove the release paper and smoothing the membrane on to the substrate.

Verification Plan will not be legally valid until payment is made.



GEOSHIELD Verification Plan



SPECIFICATION

CODE: LKH/P 1036
REVISION DATE: 16.07.15

Hydroprufe 9000

High Performance Gas Resistant Membrane

DESCRIPTION

HYDROPRUFE 9000 is a high performance reinforced, polyethylene gas resistant membrane with a 12 micron aluminium foil core that protects structures from the ingress of Methane, Carbon Dioxide and Radon. This has been specifically designed to conform with the latest guidance documents. Due to its unique composition the membrane is extremely robust and flexible and therefore easy to install on site. The membrane also provides protection from damp and therefore there is no need to install a separate DPM.

USES

Hydroprufe 9000 is designed to protect structures and occupants from dangerous gases that may exist in the ground conditions. It is laid beneath concrete to act as a gas resistant membrane whilst also acting as an effective damp proof membrane.

PROCEDURE

Surface Preparation: When applied beneath poured concrete slabs the sub-base should be well compacted and blinded with sand to prevent the membrane being punctured by any sharp protrusions. If the membrane is to be applied to the top face of a concrete slab then the concrete should be smooth without any excessive surface undulations.

TYPICAL PROPERTIES

Property	Value
Thickness	0.4mm
Weight	0.37 Kg/M ²
Colour	Green/Silver
Nail Tear Resistance	160 N
Moisture/Vapour Transmission Rate	<0.01g/M ² /24 hr
Methane Permeability	7.799 x 10 ⁻¹⁰ Kg/M ²

COMPLIANCE

Hydroprufe 9000 is approved by the BBA certificate No. 12/4957

Verification Plan will not be legally valid until payment is made.



GEOSHIELD Verification Plan



SPECIFICATION

CODE: UXHP 5759
REVISION DATE: 18.12.15



Hydroprufe LG

Liquid Applied Gas Membrane

DESCRIPTION

Hydroprufe LG is an elastomeric, one-part polymer modified liquid that dries to form a flexible, black membrane. This single part high-performance product is suitable for Gas proofing, Damp proofing and Waterproofing of vulnerable concrete structures.

USES

Hydroprufe LG is designed for both horizontal and vertical application on substructures and basements. It is suitable for application onto both new structures and existing concrete or masonry to provide a seamless membrane. It can also be applied where there is complex Gas and Damp proofing details.

ADVANTAGES

- Due to rapid drying properties installation is quick.
- Low permeability to Methane, Carbon Dioxide and Radon gases
- Can be used as a vertical and horizontal damp proof membrane
- Will provide a seamless coating, therefore eliminating any weaknesses within the membrane.
- Non-toxic water based liquid
- May be painted or screeded over

TYPICAL PROPERTIES

Property	Values
Liquid Colour	Blue or Grey
Appearance	Dries as Black coating
Curing Time	24-48 Hours
Methane Permeability	0.00864 ml/m ² /day
Adhesive to Concrete	>1.1N/mm ²
Elongation ASTM D2370	>100%
Water Penetration	No Penetration - 3.0 bars
Temperature Range During Application	>5°C

PROCEDURE

Surface Preparation: Surfaces must be clean and free from any surface contamination, such as Oil and Paint. The surface should be smooth and free from any excessive surface undulations. If necessary the substrate should be repaired using a suitable Premcrete concrete repair product. Any standing water must be removed. Service penetrations must be sealed using a suitable Preformed Top Hat Unit.

Application: Hydroprufe LG is supplied as a ready to use liquid. The liquid must be stirred for 5 minutes before application using a slow speed paddle mixer. Mixing may also be required during use. Hydroprufe LG can be applied by brush, roller or airless spray. Construction joints, and wall-floor junctions should be coated 100mm either side of the joint with the Hydroprufe LG at a coverage of 0.5ltr/m², and the

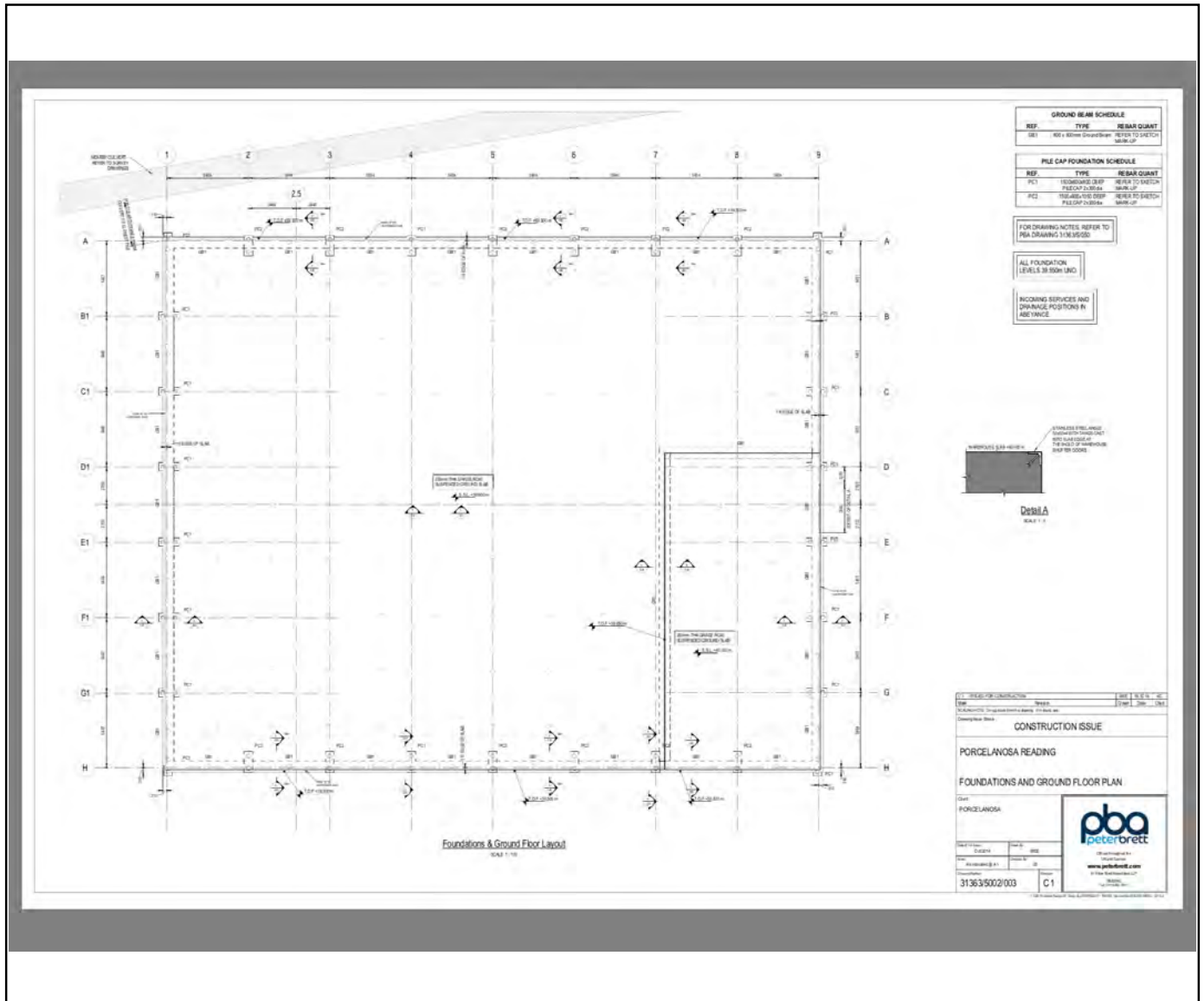
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GEOSHIELD Verification Plan



DETAILS



31363/5002/003 C1 Foundations and ground floor plan

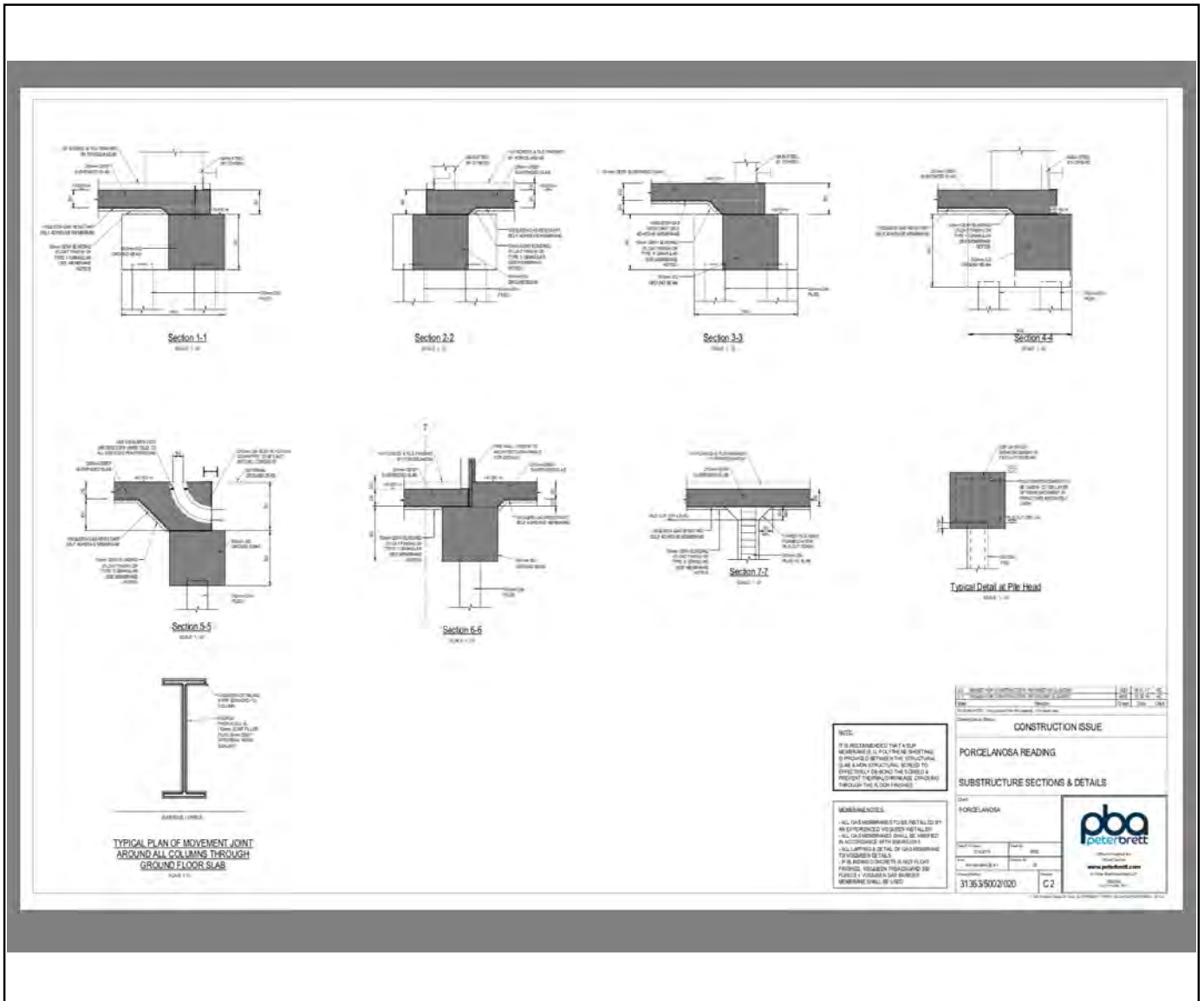
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GEOSHIELD Verification Plan



DETAILS



31363/5002/020 C2 Substructure Sections

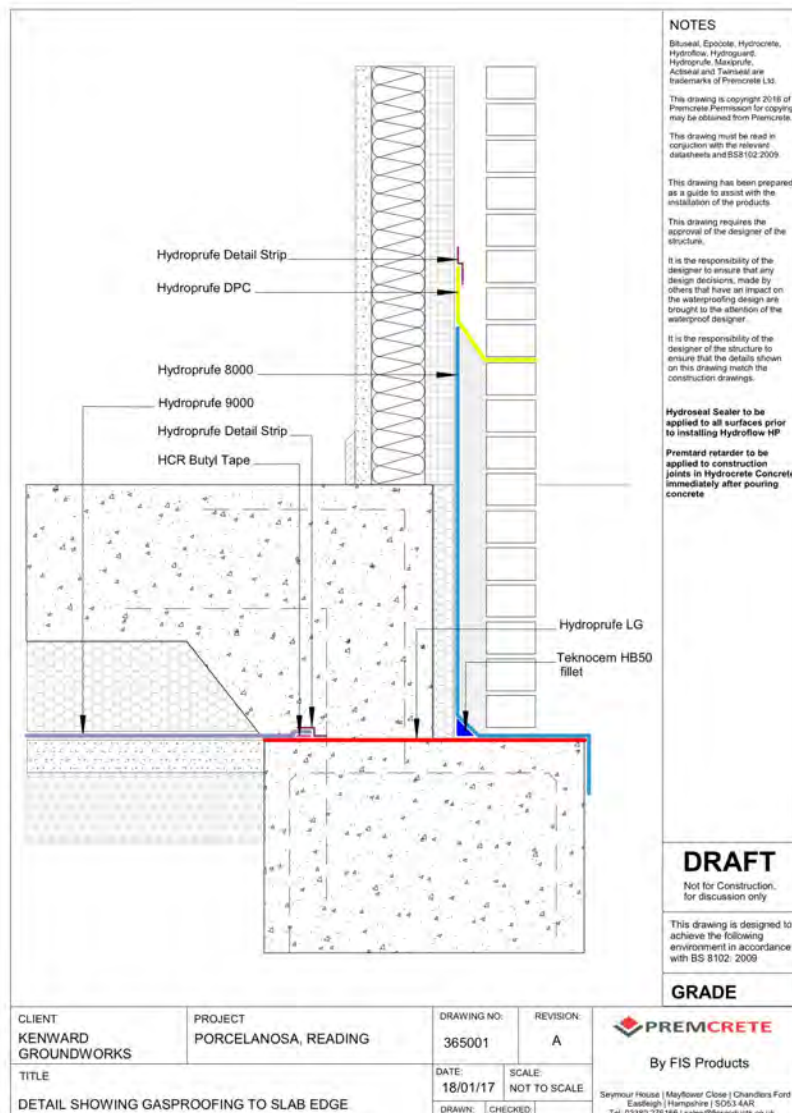
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GEOSHIELD Verification Plan

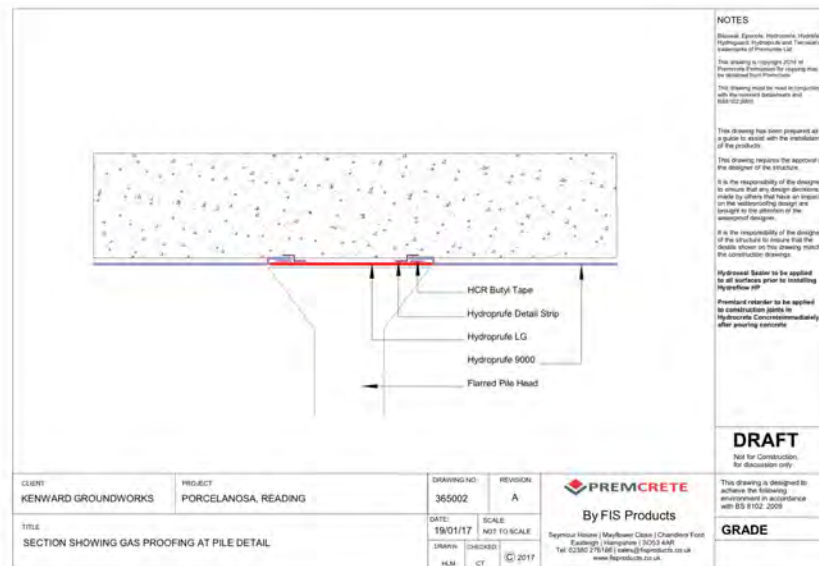


DETAILS



365001 Rev A

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365002 Rev A

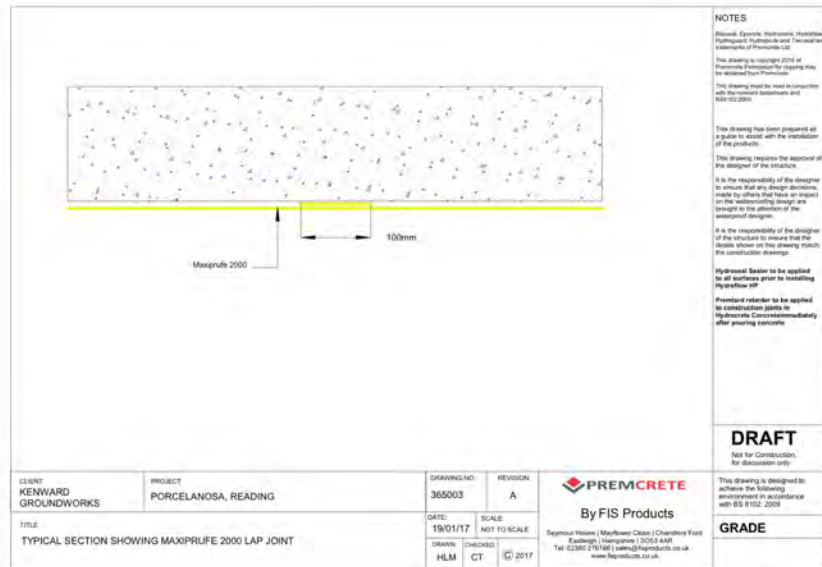
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DETAILS



365003 Rev A

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GEOSHIELD Verification Plan



DETAILS

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GEOSHIELD Verification Plan



DETAILS

Click to set image

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GEOSHIELD Verification Plan



CLIENT DETAILS

CLIENT CONTACT: Stephen Gatehouse

CONTACTS ROLE: Project Manager

MOBILE PHONE:

EMAIL ADDRESS:

CLIENT CONTACT:

CONTACTS ROLE:

MOBILE PHONE:

EMAIL ADDRESS

NOTES:

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GEOSHIELD Verification Plan



APPLICATION TEAM LEADERS

APPLICATOR NAME: Tony Groves: Foreman

COMPANY: Nick Kenward Construction Limited

APPLICATOR TEL: 07730 575862

APPLICATOR EMAIL:

APPLICATOR NAME: Frank Holman

COMPANY: Nick Kenward Construction Limited

APPLICATOR TEL: 07917 688078

APPLICATOR EMAIL:

NOTES:

NOTES:

NOTES:

NOTES:

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GEOSHIELD Verification Plan



HEALTH AND SAFETY

INDUCTION:

YES



NO:



INDUCTION TIME:

8.00am

CSCS CARD:

YES



NO:



CSCS CARD NUMBER:

02205235

METHOD STATEMENT:

YES



NO:



RISK ASSESSMENT:

YES



NO:



COSHH:

YES



NO:



SITE SPECIFIC HAZARDS:

Overhead working

Slip trips and falls

Deep excavations



GEOSHIELD Verification Plan



NOTIFICATION:

24 HOURS:	YES	☒	NO	☐
48 HOURS:	YES	☐	NO	☐

REASON FOR VISIT:

DURING INSTALLATION:	YES	☒	NO	☐
PRE - POUR:	YES	☒	NO	☐
TESTING:	YES	☒	NO	☐

TRAINING LEVEL:

SPECIALIST CONTRACTOR:	YES	☐	NO	☐
NVQ LEVEL 2:	YES	☐	NO	☐
COMPETENT APPLICATOR:	YES	☒	NO	☐
TOOLBOX BY GEOSHIELD:	YES	☒	NO	☐

NOTES:

NOTES:

NOTES:

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GEOSHIELD Verification Plan



GAS REGIME:

CS1/Green	YES	☐	NO	☐
CS2/Amber	YES	☒	NO	☐
CS3/Amber 2	YES	☐	NO	☐
CS3/ or above/Red	YES	☐	NO	☐

Building Type:

TYPE D

POINTS REQUIRED UNDER BS8485 2015

1.5

POINTS GAINED FROM BS8485 2015

Score for Structural Barrier:

0.5

Grade 2 basement:

N/A

Grade 3 basement:

N/A

Score for Venting:

N/A

Car park:

N/A

Score for Membrane:

2

POINTS ACHIEVED UNDER BS8485 2015

2.5

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GEOSHIELD Verification Plan



TESTING:

VISUAL:	YES	☒	NO	☐
NON-DESTRUCTIVE SMOKE TEST:	YES	☐	NO	☒
NON-DESTRUCTIVE COMPRESSED AIR LANCE:	YES	☒	NO	☐
DESTRUCTIVE JOINT TESTING:	YES	☒	NO	☐
NON-DESTRUCTIVE TRACER GAS:	YES	☐	NO	☒
DIELECTRIC POROSITY TEST:	YES	☐	NO	☒
PUMP TEST FOR "Twinny" WELD	YES	☐	NO	☒

NOTES:

NOTES:

NOTES:

NOTES:

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GEOSHIELD Verification Plan



VERIFICATION REPORT

These items will be included in the report

- NUMBER 1
- NUMBER 2
- NUMBER 3
- NUMBER 4
- NUMBER 5
- NUMBER 6
- NUMBER 7
- NUMBER 8

VERIFICATION REPORT ISSUE

HARD COPY: ☐ ☒ ☐ ☐ EMAIL: ☐ ☐ ☐ ☐

DROP BOX LINK: ☐ ☒ ☐ ☐ FLASH DRIVE: ☐ ☐ ☐ ☐

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GEOSHIELD Verification Plan



MEETING NOTES

Tool box: Instructed 3 groundworkers in application

All materials now on site

Have arranged procedure for calling off Verification Officer

Have instructed in preparation of substrate

Drawings have been Validated

Taped system is been used

GEOSHIELD SIGNITURE:

DATE: 13th March 2017

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Appendix C Absence of Contaminated Material Statement

Archived: 29 March 2018 14:35:59

From: David Gullon

Sent: Fri, 22 Jul 2016 07:52:06 +0000Received: from HE1PR01CA0037.eurprd01.prod.exchangelabs.com (10.163.2.175) by AM4PR01MB1444.eurprd01.prod.exchangelabs.com (10.164.76.26) with Microsoft SMTP Server (version=TLS1_2, cipher=TLS_ECDHE_RSA_WITH_AES_256_CBC_SHA384_P384) id 15.1.544.10; Fri, 22 Jul 2016 07:52:05 +0000Received: from AM5EUR02FT015.eop

To: Nick Orton

Subject: Rose Kiln Lane

Importance: Normal

d\plainHi, Nick

d\plain

d\plainFurther to our recent telephone conversation regarding the above site we can confirm that, during the course of our works, we did not discover any ground contamination.

d\plain

d\plainRegards

d\plain

d\plainDavid Gullon

d\plainSenior Surveyor

d\plain

 d\plain

d\plainHydecroft Pit, Pingewood Road North, Burghfield Bridge, Reading, RG30 3XN

d\plain

d\plain**T:** 0118 9575555 (Option 2)

d\plain**M:** 07585 440680

d\plain**E:** david.gullon@jmouldreading.co.uk

W: www.jmouldreading.co.uk

d\plain



d\plain

d\plain

Appendix D Asbestos Testing Certificates

19 July 2016

John Mould
Hydecrete Pit
Pingewood Road
Burghfield Bridge
Reading
RG30 3XN

FOR THE ATTENTION OF: David Gullon

CERTIFICATE OF BULK SAMPLE ANALYSIS

DOCUMENT NUMBER: LDN/16/07/57/DP

SITE ADDRESS: Porcelanosa, 21 Rose Kiln Lane, Reading

SITE LOCATION: As Specified

DATE CLIENT SAMPLE (S) RECEIVED: 15 July 2016

DATE(S) OF ANALYSIS : 18 July 2016

Sample Number	Sample Location and Description	Asbestos Content
16/07/C/LDN11	Stock Pile Crushed Concrete	No Asbestos Detected
16/07/C/LDN12	Stock Pile Crushed Concrete	No Asbestos Detected

DOCUMENT NUMBER: LDN/16/07/57/DP

NOTES

If asbestos is present in the material which the sample represents, and if this material is to be removed or otherwise disturbed, then safety precautions must be taken in accordance with the Control of Asbestos Regulations 2012 and amendments, in addition to relevant Health and Safety Executive (HSE) Codes of Practice.

Chrysotile – **WHITE** asbestos

Amosite - **BROWN** asbestos

Crocidolite – **BLUE** asbestos

Other less common types of asbestos are fibrous **actinolite, anthophyllite and tremolite**, which for legislative purposes must be treated as being similar to Amosite.

Estimates of concentration are outside the scope of our UKAS Accreditation and the method of analysis employed. However, further guidance on typical percentages of asbestos used in various products is available within HSG 264, published by the HSE. Where only a small number of asbestos fibres have been found in a sample, and the sample matrix is not an ACM, the analysis result may be recorded as '**Trace**'.

Where floor tiles or floor coverings have been analysed, asbestos may be found in the bitumen adhesive used to fix these products. If asbestos has been found in the bitumen layer only, the analysis result may be recorded as '**In bitumen only**'

Method of Analysis

All bulk samples were analysed in accordance with documented in-house method QCRF2, OH4, based upon methods in the HSE publication HSG 248 – Asbestos: The analysts' guide for sampling, analysis and clearance procedures. Samples are subjected to initial stereo microscope examination to determine the presence of fibre, accompanied by mechanical and / or chemical treatment to release fibres from the sample matrix. Fibres are then analysed using polarised light microscopy techniques, including central stop dispersion staining, to confirm asbestos type.

Clients' Samples

Where clients have provided their own samples of bulk materials, APEC is not responsible for such sampling, nor for the consequences of inaccurate results or conclusions based on these samples.

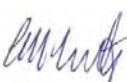
On behalf of APEC Environmental Limited

Samples Analysed By;

Signed: 

	M Curtis
✓	P McGregor

Report Authorised By;

Signed: 

✓	M Curtis	Operations Manager
	J Snow	Project Manager (London)

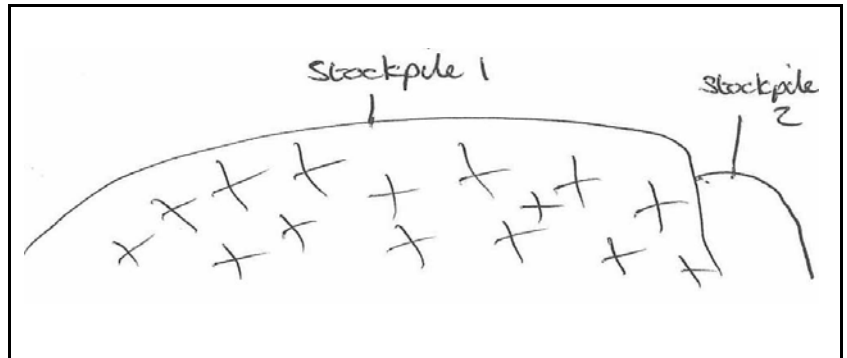
CERTIFICATE OF SAMPLING - AGGREGATE IN ACCORDANCE WITH BS EN 932-1 : 1997

Laboratory reference no(s) : **16-74670 - 278297** Head Office Certificate No : **278297-16-74670-0-E01**
 Site sample no. : **Z4001**
 Client : **J Mould (Reading)**
 Certificate address : **Hydecrete pit, Pingewood Road North
Reading
Berkshire
RG30 3XN**
 Contract : **Rose Kiln Lane - Reading**
 Source of material (as indicated by client) : **Ex-Site**
 Client reference/data : **Sample 1**
 Analysis required : **PSD(Wet sieve)**

Client's indicated specification(s) : **SHW:Series 600: Class 6F2**

Material description : **Crushed Concrete, Brick, Fines & Rock (6F2)**
 Nominal dimension : **<125 mm**
 Material type : **Artificial (Land based)**
 Comments on sample: **None**
 Size of batch : **> 50 ton** Sampling plan : **G1**
 Date sampled : **14/07/2016** Time sampled : **1140**
 Variation from sampling procedure : **None**
 Description of batch / Location of sample on site : **Stockpile**

Sketch indicating location points and number of increments when there is segregation/contamination or lack of uniformity within the sample material :



Total mass received at laboratory : **147.97 kg**
 Remarks : **None**

Name of sampler : **RJM** Approved :  Date : **26/07/2016**
 Andy Bates Laboratory Manager

Bulk samples will be retained for a minimum of 21 days from date of receipt unless a written instruction is received within 14 days of receipt requesting sample retention
 Any statement of compliance with a given specification relates only to the test covered by this certificate.

Opinions and interpretations, if stated, are not within the scope of our UKAS accreditation
 This report shall not be reproduced, except in full, without prior written approval of the laboratory

Page 1 of 1

Head Office

Unit 14
Blackhill Road West
Holton Heath Trading Park
Poole
Dorset BH16 6LE

Tel 01202 622858
Fax 01202 626046

Registered Office

Unit 14
Blackhill Road West
Holton Heath Trading Park
Poole
Dorset BH16 6LE
ACS Testing Limited
Registered in England and
Wales No. 4639658



Quality Testing & Materials Consultancy
to the
Construction Industry



**CERTIFICATE OF TEST - PARTICLE SIZE DISTRIBUTION BY WASHING & SIEVING METHOD
TESTED IN ACCORDANCE WITH B.S. 1377 : PART 2 : 1990 : CLAUSE 9.2**

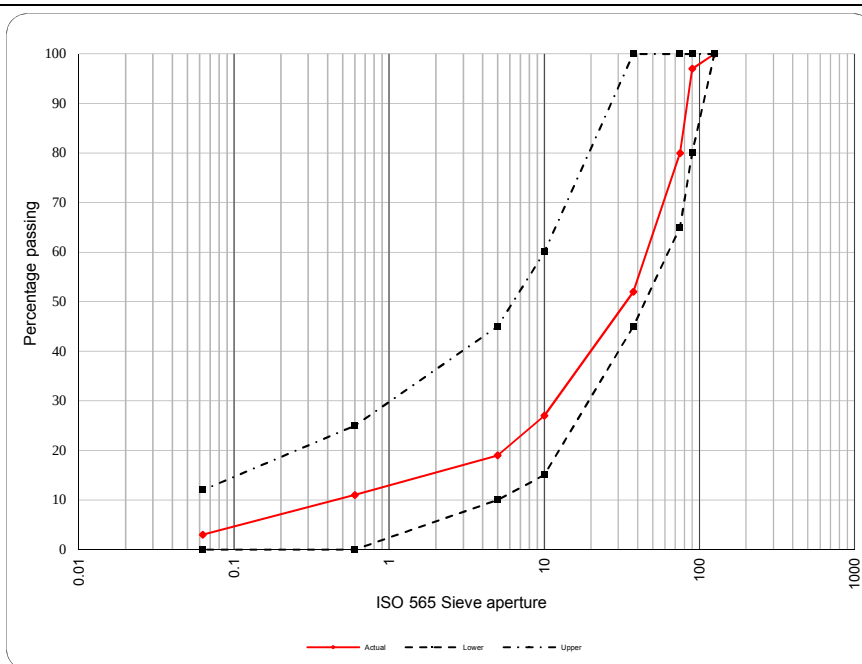
Laboratory reference no(s) : **16-74670 - 278297** Head Office Certificate No : **278297-16-74670-S05**

Client : **J Mould (Reading)**
 Certificate address : **Hydecree pit, Pingewood Road North
 Burghfield Bridge, Reading, Berkshire
 RG30 3XN**

Contract : **Rose Kiln Lane - Reading**

Source of material (as indicated by client) : **Ex-Site**
 Client reference/data : **Sample 1**
 Location of sample on site : **Stockpile**
 Borehole/pit no / depth : **N/A @ N/A m**
 Date sampled : **14/07/2016**
 Sampled by : **RJM**
 Date received : **14/07/2016**
 Material description : **Crushed Concrete, Brick, Fines & Rock (6F2)**
 Total mass received : **147.97 kg**
 Method of preparation : **BS 1377 : Part 1 & Part 2**
 Variation from test procedure : **None**
 Location & orientation of test specimen within original sample : **N/A**
 Sampling certificate : **Yes - See Enclosed**
 Client's indicated specification(s) : **SHW: Series 600: Table 6/2: Class 6F2**

ISO 565 Sieve aperture	Percentage passing	Specification limits (Percentage passing)	
		Actual	Upper
125.00mm	100	100	100
90.00mm	97	80	100
75.00mm	80	65	100
63.00mm	70		
50.00mm	59		
37.50mm	52	45	100
28.00mm	48		
20.00mm	40		
14.00mm	34		
10.00mm	27	15	60
6.30mm	21		
5.00mm	19	10	45
3.35mm	17		
2.00mm	15		
1.18mm	13		
0.600mm	11	0	25
0.425mm	10		
0.300mm	8		
0.212mm	6		
0.150mm	5		
0.063mm	3	0.0	12.0



Remarks : **This sample of material complies with the requirements of the clients indicated specification**
Uniformity Coefficient = 121

Tested by : **DHDPAJASJMJMSDC** Date tested : **26/07/2016** Approved : **Andy Bates Laboratory Manager**

Bulk samples will be retained for a minimum of 21 days from date of receipt unless a written instruction is received within 14 days of receipt requesting sample retention
 Any statement of compliance with a given specification relates only to the test covered by this certificate. Opinions and interpretations, if stated, are not within the scope of our UKAS accreditation
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 ACS Testing Limited
 Registered in England and
 Wales No. 4639658



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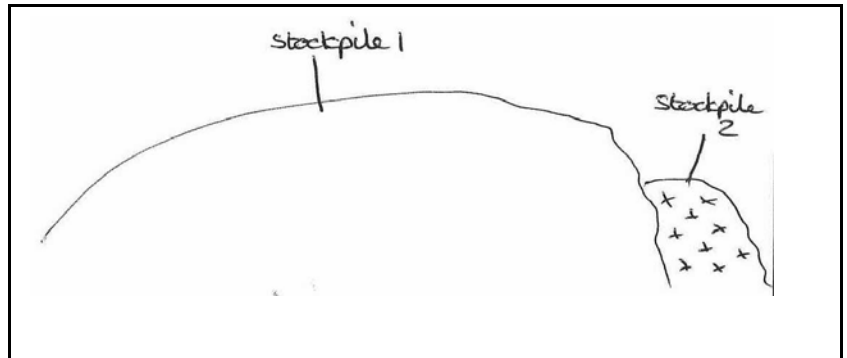


CERTIFICATE OF SAMPLING - AGGREGATE IN ACCORDANCE WITH BS EN 932-1 : 1997

Laboratory reference no(s) : **16-74670 - 278298** Head Office Certificate No : **278298-16-74670-0-E01**
 Site sample no. : **Z4002**
 Client : **J Mould (Reading)**
 Certificate address : **Hydecrete pit, Pingewood Road North
Reading
Berkshire
RG30 3XN**
 Contract : **Rose Kiln Lane - Reading**
 Source of material (as indicated by client) : **Ex-Site**
 Client reference/data : **Sample 2**
 Analysis required : **PSD(Wet sieve)**
 Client's indicated specification(s) : **SHW:Series 600: Class 6F2**

Material description : **Crushed Brick, Mortar, Concrete & Fines**
 Nominal dimension : **<125 mm**
 Material type : **Artificial (Land based)**
 Comments on sample: **None**
 Size of batch : **> 50 ton** Sampling plan : **G1**
 Date sampled : **14/07/2016** Time sampled : **1210**
 Variation from sampling procedure : **None**
 Description of batch / Location of sample on site : **Stockpile**

Sketch indicating location points and number of increments when there is segregation/contamination or lack of uniformity within the sample material :



Total mass received at laboratory : **115.89 kg**
 Remarks : **None**

Name of sampler : **RJM** Approved : **Andy Bates Laboratory Manager** Date : **26/07/2016**

Bulk samples will be retained for a minimum of 21 days from date of receipt unless a written instruction is received within 14 days of receipt requesting sample retention
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**CERTIFICATE OF TEST - PARTICLE SIZE DISTRIBUTION BY WASHING & SIEVING METHOD
TESTED IN ACCORDANCE WITH B.S. 1377 : PART 2 : 1990 : CLAUSE 9.2**

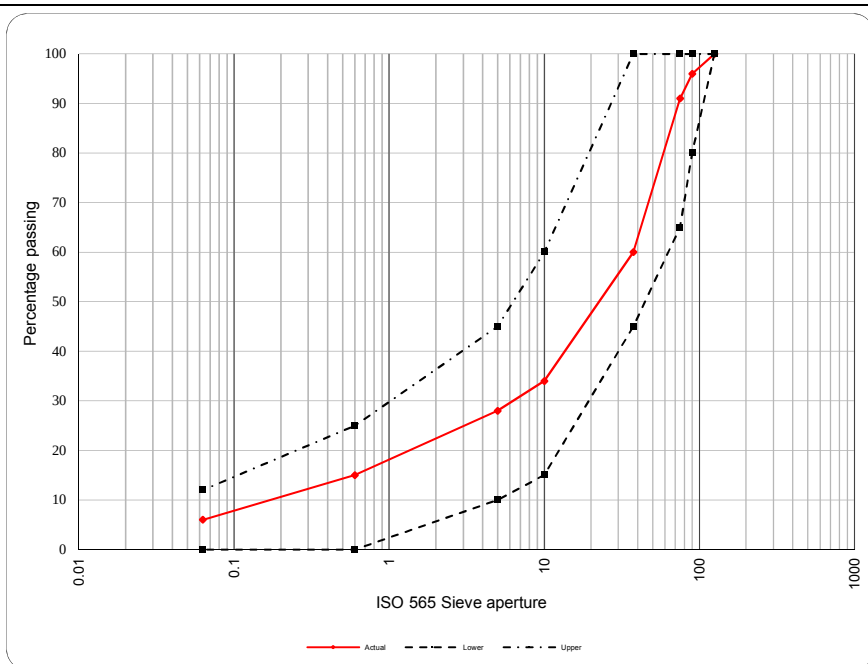
Laboratory reference no(s) : **16-74670 - 278298** Head Office Certificate No : **278298-16-74670-S05**

Client : **J Mould (Reading)**
 Certificate address : **Hydecree pit, Pingewood Road North
 Burghfield Bridge, Reading, Berkshire
 RG30 3XN
 Rose Kiln Lane - Reading**

Contract : **Rose Kiln Lane - Reading**

Source of material (as indicated by client) : **Ex-Site**
 Client reference/data : **Sample 2**
 Location of sample on site : **Stockpile**
 Borehole/pit no / depth : **N/A @ N/A m**
 Date sampled : **14/07/2016**
 Sampled by : **RJM**
 Date received : **14/07/2016**
 Material description : **Crushed Brick, Mortar, Concrete & Fines**
 Total mass received : **115.89 kg**
 Method of preparation : **BS 1377 : Part 1 & Part 2**
 Variation from test procedure : **None**
 Location & orientation of test specimen within original sample : **N/A**
 Sampling certificate : **Yes - See Enclosed**
 Client's indicated specification(s) : **SHW: Series 600: Table 6/2: Class 6F2**

ISO 565 Sieve aperture	Percentage passing	Specification limits (Percentage passing)	
	Actual	Lower	Upper
125.00mm	100	100	100
90.00mm	96	80	100
75.00mm	91	65	100
63.00mm	83		
50.00mm	72		
37.50mm	60	45	100
28.00mm	51		
20.00mm	44		
14.00mm	38		
10.00mm	34	15	60
6.30mm	30		
5.00mm	28	10	45
3.35mm	25		
2.00mm	22		
1.18mm	19		
0.600mm	15	0	25
0.425mm	12		
0.300mm	10		
0.212mm	8		
0.150mm	7		
0.063mm	6	0.0	12.0



Remarks : **This sample of material complies with the requirements of the clients indicated specification**
Uniformity Coefficient = 125

Tested by : **JASJMJPMJKSDC** Date tested : **20.07.2016** Approved : **Andy Bates Laboratory Manager** Date : **26/07/2016**

Bulk samples will be retained for a minimum of 21 days from date of receipt unless a written instruction is received within 14 days of receipt requesting sample retention
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Appendix E Design of Gas Protection Measures

Appendix E.1 Product Information

Premcrete

Metro House
Pepper Road
Leeds
West Yorkshire LS10 2RU
Tel: 0800 619 1619
e-mail: sales@premcrete.com
website: www.premcrete.com



Agrément Certificate
12/4957
Product Sheet 1

PREMCRETE GAS RESISTANT DAMP-PROOF MEMBRANES

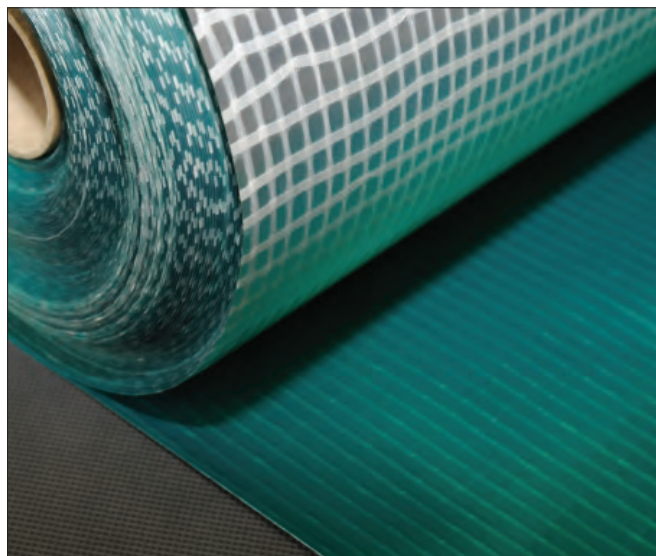
HYDROPRUFE 9000

This Agrément Certificate Product Sheet⁽¹⁾ relates to Hydroprufe 9000, for use as a LDPE gas barrier and damp-proof membrane in solid concrete ground floors not subject to hydrostatic pressure, to protect buildings against, moisture, radon, methane and carbon dioxide from the ground.

(1) Hereinafter referred to as 'Certificate'.

CERTIFICATION INCLUDES:

- factors relating to compliance with Building Regulations where applicable
- factors relating to additional non-regulatory information where applicable
- independently verified technical specification
- assessment criteria and technical investigations
- design considerations
- installation guidance
- regular surveillance of production
- formal three-yearly review.



KEY FACTORS ASSESSED

Resistance to water and water vapour — the membrane provides an effective barrier to the passage of liquid water and water vapour from the ground (see section 6).

Resistance to underground gases — the membrane is capable of restricting the ingress of radon, methane and carbon dioxide gases into the building (see section 7).

Resistance to puncture — on smooth or blinded surfaces the membrane will accept without damage the limited foot traffic and loads associated with the installation of the system (see section 8).

Durability — under normal service conditions the membrane will remain effective against the ingress of water and water vapour, and will restrict the ingress of radon, methane and carbon dioxide during the lifetime of the concrete slab in which it is installed (see section 13).

The BBA has awarded this Certificate to the company named above for the product described herein. This product has been assessed by the BBA as being fit for its intended use provided it is installed, used and maintained as set out in this Certificate.

On behalf of the British Board of Agrément

Date of First issue: 11 January 2013

Simon Wroe
Head of Approvals — Materials

Greg Cooper
Chief Executive

The BBA is a UKAS accredited certification body — Number 113. The schedule of the current scope of accreditation for product certification is available in pdf format via the UKAS link on the BBA website at www.bbacerts.co.uk

Readers are advised to check the validity and latest issue number of this Agrément Certificate by either referring to the BBA website or contacting the BBA direct.

British Board of Agrément
Bucknalls Lane
Watford
Herts WD25 9BA

©2013

tel: 01923 665300
fax: 01923 665301
e-mail: mail@bba.star.co.uk
website: www.bbacerts.co.uk

Regulations

In the opinion of the BBA, Hydroprufe 9000, if installed, used and maintained in accordance with this Certificate, will meet or contribute to meeting the relevant requirements of the following Building Regulations (the presence of a UK map indicates that the subject is related to the Building Regulations in the region or regions of the UK depicted):



The Building Regulations 2010 (England and Wales) (as amended)

Requirement:	C1(2)	Site preparation and resistance to contaminants
Comment:		The product can contribute to a structure satisfying the requirements of this Requirement. See sections 7.1 and 7.2 of this Certificate.
Requirement:	C2(a)	Resistance to moisture
Comment:		The product will enable a floor to meet this Requirement. See sections 6.1 and 6.2 of this Certificate.
Requirement:	Regulation 7	Materials and workmanship
Comment:		The product is an acceptable material. See section 13.1, and the <i>Installation</i> part of this Certificate.



The Building (Scotland) Regulations 2004 (as amended)

Regulation:	8(1)	Fitness and durability of materials and workmanship
Comment:		The product can contribute to a construction satisfying this Regulation. See section 13.1 and the <i>Installation</i> part of this Certificate.
Regulation:	9	Building standards applicable to construction
Standard:	3.1	Site preparation — harmful and dangerous substances
Standard:	3.2	Site preparation — protection from radon gas
Comment:		The product will enable a floor to satisfy the requirements of these Standards, with reference to clauses 3.1.2 ⁽¹⁾⁽²⁾ , 3.1.6 ⁽¹⁾⁽²⁾ , 3.1.7 ⁽¹⁾⁽²⁾ , 3.1.8 ⁽¹⁾⁽²⁾ , 3.2.1 ⁽²⁾ and 3.2.2 ⁽¹⁾⁽²⁾ . See sections 6.1 and 6.2 of this Certificate.
Standard:	3.4	Moisture from the ground
Comment:		When properly installed in a correctly designed structure, the product forms an effective barrier to the movement of water within the ground-floor slab, enabling compliance with this Standard, with reference to clauses 3.4.2 ⁽¹⁾⁽²⁾ , 3.4.4 ⁽¹⁾⁽²⁾ and 3.4.6 ⁽¹⁾⁽²⁾ . See sections 6.1 and 6.2 of this Certificate.
Standard:	7.1(a)	Statement of sustainability
Comment:		The product can contribute to meeting the relevant requirements of Regulation 9, Standards 1 to 6 and therefore will contribute to a construction meeting a bronze level of sustainability as defined in this Standard.
Regulation:	12	Building standards applicable to conversions
Comment:		Comments made in relation to this product under Regulation 9, Standards 1 to 6 also apply to this Regulation, with reference to clause 0.12.1 ⁽¹⁾⁽²⁾ and Schedule 6 ⁽¹⁾⁽²⁾ . (1) Technical Handbook (Domestic). (2) Technical Handbook (Non-Domestic).



The Building Regulations (Northern Ireland) 2012

Regulation:	23(a)(i)(iii)(b)(i)	Fitness of materials and workmanship
Comment:		The product is acceptable. See section 13.1 and the <i>Installation</i> part of this Certificate.
Regulation:	26(1)(b)(2)	Site preparation and resistance to contaminants
Comment:		The product can contribute to a structure satisfying the requirements of this Regulation. See sections 7.1 and 7.2 of this Certificate.
Regulation:	28(a)	Resistance to moisture and weather
Comment:		The product will enable a floor to satisfy this Regulation. See sections 6.1 and 6.2 of this Certificate.

Construction (Design and Management) Regulations 2007

Construction (Design and Management) Regulations (Northern Ireland) 2007

Information in this Certificate may assist the client, CDM co-ordinator, designer and contractors to address their obligations under these Regulations.

See section: 3 *Delivery and site handling* (3.1 and 3.2) of this Certificate.

Additional Information

NHBC Standards 2013

NHBC accepts the use of Hydroprufe 9000, when installed and used in accordance with this Certificate, in relation to *NHBC Standards*, Chapters 4.1 *Land quality — managing ground conditions* and 5.1 *Substructure and ground bearing floors*.

Technical Specification

1 Description

1.1 Hydroprufe 9000 is a 0.4 mm thick, LDPE membrane with an integral aluminium foil and polyester scrim reinforcement reinforcing grid. The top surface of the membrane is green and the reverse silver.

1.2 The membrane has nominal characteristics of:

Thickness (mm)	0.4
Width (m)	2
Weight (kg·m ⁻²)	0.37
Roll length (m)	50
Methane gas permeability (m·s ⁻¹)	$7.799 \times 10^{-12(1)(2)(3)}$

(1) Plain membrane without joints.

(2) For taped joints 2.361×10^{-7} .

(3) For welded joints 6.323×10^{-8} .

1.3 Ancillary products available but which are outside the scope of the Certificate are:

- Hydroprufe Starter Band — perimeter edging strip
- HCR Butyl Tape — a cross-linked butyl sealing and bonding strip
- Hydroprufe Tophats — preformed top hat section for sealing around pipe penetrations in the gas membrane
- Hydroprufe 8000 (Self Adhesive Gas Membrane) — aluminium/polyethylene laminate with a modified bitumen adhesive backing, used to maintain gas membrane continuity on vertical surfaces and around complex penetrations and foundations
- Hydroprufe Flashing Strip — foil tape used for sealing around column penetrations and for repairs/patching of membranes damaged during installation
- Hydroprufe Preformed Corner Piece — preformed internal and external sections for detailing of the membrane at perimeter corners, in accordance with BS 8215 : 1991
- Hydroprufe Primer — primer for preparing substrates prior to the application of Hydroprufe 8000
- Protection Board 600 — a board for protecting the membrane from mechanical damage and puncture from backfilling
- Hydroprufe Protection Fleece — a fleece for protecting the membrane from mechanical damage and puncture from backfilling
- Hydrovoid 2000 — a passive ventilation system for use where ventilation is required in accordance with design including bespoke pipe and vent layouts.

2 Manufacture

2.1 The product is manufactured by extrusion and lamination between the various layers.

2.2 As part of the assessment and ongoing surveillance of product quality, the BBA has:

- agreed with the manufacturer the quality control procedures and product testing to be undertaken
- assessed and agreed the quality control operated over batches of incoming materials
- monitored the production process and verified that it is in accordance with the documented process
- evaluated the process for management of nonconformities
- checked that equipment has been properly tested and calibrated
- undertaken to carry out the above measures on a regular basis through a surveillance process, to verify that the specifications and quality control operated by the manufacturer are being maintained.

3 Delivery and site handling

3.1 Rolls are wrapped in clear polythene film, marked with a label indicating the product grade and with a warning that the load exceeds 15 kg. The rolls must be stored on their sides.

3.2 Rolls must be stacked laid on their side on a flat surface, kept under cover and protected from sunlight and mechanical damage.

Assessment and Technical Investigations

The following is a summary of the assessment and technical investigations carried out on Hydroprufe 9000.

4 Use

4.1 Hydroprufe 9000 is satisfactory for use as a damp-proof membrane under concrete, screed and floor slabs in accordance with CP 102 : 1973, Section 2, and to restrict the ingress of radon, methane and carbon dioxide gases into buildings from landfill and naturally occurring sources.

4.2 Buildings in areas of risk from landfill gas should be constructed in accordance with the recommendations of BRE Report 211 (BR 211 : 2007) *Radon : guidance on protective measures for new dwellings*, BRE Report 212 (BR 212 : 1991) *Construction of new buildings on gas-contaminated land*, BRE Report 414 (BR 414 : 2001) *Protective measures for housing on gas-contaminated land*, CIRIA C665 : 2007 *Assessing risks posed by hazardous ground gases to buildings*, BS 8485 : 2007 and the *Ground Gas Handbook*, 2009.

5 Practicability of installation

The membrane is designed to be installed by a competent general builder, or a contractor, experienced with this type of product.

6 Resistance to water and water vapour



6.1 The membranes, including joints, provide an effective barrier to the passage of liquid moisture from the ground.

6.2 When installed in accordance with the following documents, the membrane will comply with the minimum sheet thickness detailed in the national Building Regulations:

England and Wales — Approved document C, Requirement C2(a), Section 4.6

Scotland — Mandatory Standard 3.4, clauses 3.4.2, 3.4.4 and 3.4.6

Northern Ireland — Regulation 28(a).

6.3 The membrane is impervious to water and provides a waterproof layer capable of accepting minor structural movements without damage.

7 Resistance to underground gases



7.1 Examination of the results of test data indicate that the product is capable of restricting the ingress of radon, methane and carbon dioxide gases into buildings through the ground-floor slab from naturally occurring sources and/or landfill.

7.2 BRE Reports 211 and 212 recommend 300 µm thick polyethylene sheet as the minimum required thickness for a gas-resistant membrane. It is generally accepted that other materials with comparable or higher gas resistance are suitable, provided they can withstand the construction processes. In the opinion of the BBA, the product meets the criteria.

7.3 When installed in accordance with BRE Report 414 the membrane will be compliant with the recommendations made in CIRIA C665 : 2007, BS 8485 : 2007, BRE Report 211 and *NHBC Standards*. Guidance is given in the *Ground Gas Handbook*, 2009 and the Certificate holder's technical literature.

8 Resistance to puncture

8.1 The membrane can be punctured by sharp objects and care should be taken when handling building materials over the exposed surface.

8.2 On smooth or blinded surfaces the membrane will accept without damage the limited foot traffic and loads associated with the installation of the system.

8.3 Depending on the type of construction, Protection Board 600 or Hydroprufe Protection Fleece may be used to minimise the risk of puncture to the membrane.

9 Compatibility with other materials

The membrane contains an aluminium foil interplay which may be subject to corrosion by alkaline conditions if damage to the membrane and exposure occurs. However, under normal circumstances the polyethylene faces of the membrane are compatible with other materials and products typically used in the same area.

10 Underfloor heating

When used in conjunction with underfloor heating, under normal operating conditions there will be no adverse effect on the membrane; however in other circumstances the Certificate holder's advice should be sought.

11 Effects of temperature

When the membrane is loose-laid and the joints are taped the installation temperature should not be below 5°C.

12 Maintenance

As the product is confined under concrete and has suitable durability (see section 13) maintenance is not required. However, it must be ensured that any damage occurring before enclosure is repaired (see section 16).

13 Durability

 13.1 Results of artificial ageing tests indicate that a satisfactory retention of physical properties is achieved. The membrane will, in normal circumstances, remain effective against the ingress of water and water vapour and will restrict the ingress of radon, methane and carbon dioxide during the lifetime of the building.

13.2 Long periods of exposure to ultraviolet light will reduce the effectiveness of the membrane.

Installation

14 General

14.1 Hydroprufe 9000 must be installed and fixed in accordance with the Certificate holder's instructions, the relevant Clauses of CP 102 : 1973, Section 2, BS 8000-4 : 1989 and section 14 of this Certificate.

14.2 The membrane can be installed in all normal site conditions, provided that the air temperature is not below 5°C to prevent the risk of surface condensation.

15 Procedure

15.1 The product should be applied to surfaces that have a smooth finish, ie they should be free from voids, projections and mortar deposits. Surfaces should be dry and free from dust and frost.

15.2 Concrete surfaces should be dense. Vertical surfaces of brickwork and blockwork should be dry and rendered to provide an even surface. Brickwork or unrendered blockwork must be flush pointed to give a smooth surface without sudden changes in level.

15.3 The membrane is rolled out with green side uppermost, ensuring that it is properly aligned. All end and side laps should be a minimum of 150 mm and prepared in accordance with the manufacturer's instructions (see Figure 1).

15.4 Joints are bonded with HCR Butyl Tape applied 50 mm from the edge of Hydroprufe 9000 membrane. When using HCR Butyl Tape the joints should be pressed down with a stiff brush to ensure that it is well adhered (see Figure 1). Alternatively joints can be hot-air welded.

Figure 1 Application of Hydroprufe 9000



15.5 The surface of the damp-proof membrane to be lapped must be dry and dust free.

15.6 All service penetrations and direction changes should be properly detailed. Hydroprufe Tophats are available for sealing around pipe entries. Service ducts must be vented to prevent the possibility of gas accumulating in confined spaces.

15.7 When the membrane is to be laid below the concrete slab it should be loose-laid to accommodate any small movement.

15.8 The membrane must extend over the footprint of the building with a stepped damp-proof course separated with a mortar joint.

15.9 The membrane is either covered by a screed or other protective layer as soon as possible after installation. If blockwork is the protection used, care must be taken to avoid damage to the membrane during construction.

15.10 The membrane installation should be subject to third party independent validation in accordance with the *Ground Gas Handbook*, 2009.

16 Repair

Before permanent protection is placed, the membrane area must be inspected for defects. Damage to the product must be repaired using Hydroprufe Flashing Strip, or if a larger repair is required by using a patch of the membrane and the laps sealed with HCR Butyl Tape. All patches must extend a minimum of 150 mm from the damaged area. If required by the local authority repair work should be confirmed by an independent validation report, as all gas membrane installation should be subject to third party validation in accordance with *Ground Gas Handbook 2009, Chapter 9*.

Technical Investigations

17 Tests

An assessment was made of test data in relation to:

- dimensions
- mass per unit area
- tensile strength and elongation at break
- nail tear resistance
- water vapour permeability
- water vapour resistance
- watertightness
- resistance to static loading
- resistance to impact
- heat ageing at 70°C for 84 days followed by tensile strength and elongation, nail tear resistance and watertightness
- short term UV ageing, followed by tensile strength and elongation.

Tests on joints

- tensile strength
- heat ageing at 70°C for 84 days followed by tensile strength.

18 Investigations

18.1 An evaluation was made of the results of the test data on the permeability of radon, methane and carbon dioxide in relation to the product.

18.2 The manufacturing process was evaluated, including methods adopted for quality control, and details were obtained of the quality and composition of the materials used.

18.3 A site visit was conducted to assess practicability of installation.

Bibliography

BS 8000-4 : 1989 *Workmanship on building sites — Code of practice for waterproofing*

BS 8215 : 1991 *Code of practice for design and installation of damp-proof courses in masonry construction*

BS 8485 : 2007 *Code of practice for the characterization and remediation from ground gas in affected areas*

CP 102 : 1973 *Code of practice for protection of buildings against water from the ground*

19 Conditions

19.1 This Certificate:

- relates only to the product/system that is named and described on the front page
- is issued only to the company, firm, organisation or person named on the front page — no other company, firm, organisation or person may hold or claim that this Certificate has been issued to them
- is valid only within the UK
- has to be read, considered and used as a whole document — it may be misleading and will be incomplete to be selective
- is copyright of the BBA
- is subject to English Law.

19.2 Publications, documents, specifications, legislation, regulations, standards and the like referenced in this Certificate are those that were current and/or deemed relevant by the BBA at the date of issue or reissue of this Certificate.

19.3 This Certificate will remain valid for an unlimited period provided that the product/system and its manufacture and/or fabrication, including all related and relevant parts and processes thereof:

- are maintained at or above the levels which have been assessed and found to be satisfactory by the BBA
- continue to be checked as and when deemed appropriate by the BBA under arrangements that it will determine
- are reviewed by the BBA as and when it considers appropriate.

19.4 The BBA has used due skill, care and diligence in preparing this Certificate, but no warranty is provided.

19.5 In issuing this Certificate, the BBA is not responsible and is excluded from any liability to any company, firm, organisation or person, for any matters arising directly or indirectly from:

- the presence or absence of any patent, intellectual property or similar rights subsisting in the product/system or any other product/system
- the right of the Certificate holder to manufacture, supply, install, maintain or market the product/system
- actual installations of the product/system, including their nature, design, methods, performance, workmanship and maintenance
- any works and constructions in which the product/system is installed, including their nature, design, methods, performance, workmanship and maintenance
- any loss or damage, including personal injury, howsoever caused by the product/system, including its manufacture, supply, installation, use, maintenance and removal
- any claims by the manufacturer relating to CE marking.

19.6 Any information relating to the manufacture, supply, installation, use, maintenance and removal of this product/system which is contained or referred to in this Certificate is the minimum required to be met when the product/system is manufactured, supplied, installed, used, maintained and removed. It does not purport in any way to restate the requirements of the Health and Safety at Work etc. Act 1974, or of any other statutory, common law or other duty which may exist at the date of issue or reissue of this Certificate; nor is conformity with such information to be taken as satisfying the requirements of the 1974 Act or of any statutory, common law or other duty of care.



Hydroprufe 8000

Gas Resistant Self-Adhesive Membrane

DESCRIPTION

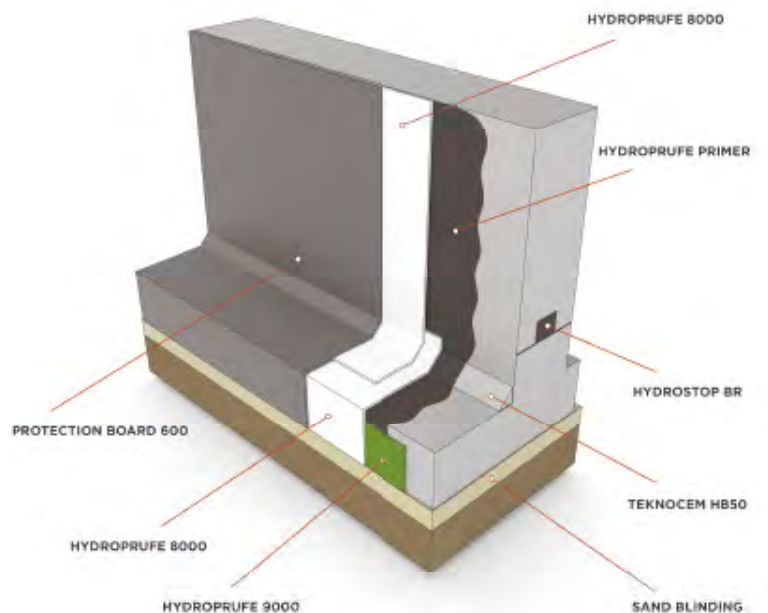
HYDROPRUFE 8000 is a high performance, cold applied waterproof membrane, manufactured from an aluminium/polythene laminate coated on one surface with a layer of self-adhesive polymer modified bitumen.

ADVANTAGES

- Rapid and easy cold application
- Aluminium laminate provides methane and radon protection.
- Flexible and accommodating giving excellent bond to substrate.
- Non-hazardous and resistant to dilute acids and alkalis
- High performance protection against surface and ground water and soluble salts.
- Capable of resisting a 6 metre head of water when fully supported.
- Conforms to BS 8102:2009.

USES

HYDROPRUFE 8000 is used as a high performance self-adhesive waterproofing membrane for substructures where resistance against methane and radon gas is required. Such applications include the waterproofing of basements, underground car parks, water tanks, reservoirs etc.

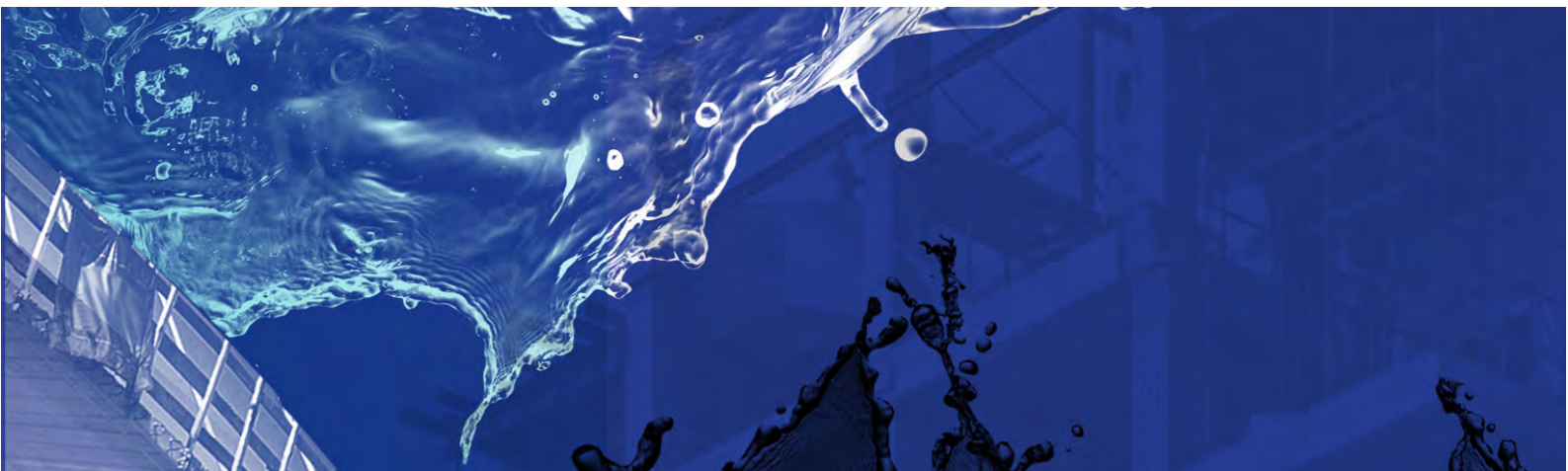


PROCEDURE

Surface Preparation: The surface should be smooth and free from sharp projections and hollows. Cured concrete bases should be dry and swept free of dust and rubble. Internal and external angles require profiling prior to application.

Priming: Apply Hydroprufe Primer by roller, brush or spray (at a nominal rate of 8 M2 per litre) and allow to dry.

Application: The release paper should be removed for the first 500 mm of the roll and the membrane pressed firmly into position to ensure no air pockets are formed. Application of the roll is then completed by continuing to remove the release paper and smoothing the membrane on to the substrate



Adjacent rolls should allow a minimum side overlap of 50 mm and end overlap of 100mm. This overlap is in addition to any overlap on to the selvedge. Prior to overlapping adjacent rolls the release strip protecting the selvedge should be removed. Joints should be firmly pressed to ensure a watertight seal. On internal or external angles or corners a reinforcing strip should be applied. The membrane should always be laid across the falls.

After application, a screed or protection board should be laid immediately.

COVERAGE

Protection Board 600: Bitumen impregnated board designed to protect membranes from damage through backfilling and trafficking.

Hydroprufe Primer: Bitumen primer for application to all substrates prior to application of Hydroprufe 8000.

Hydroprufe Top Hat: Preformed polymeric Top Hat to waterproof around pipe penetrations through the membrane.

Hydroprufe Corner Piece: Preformed polymeric Corner pieces for easy waterproofing of internal and external corners.

TYPICAL PROPERTIES

Property	Test Method	Value
Total Membrane Thickness	ASTM D1000	1.0 mm
Membrane Strength	ASTM D1000	3.0N/mm ²
Elongation - Membrane	ASTM D1000	40%
Puncture Resistance	ASTM E154	250 N
Adhesion	ASTM D1000	2.0 MPa
Water Vapour Transmission	ASTM E96	<0.01 g/M2/24
Methane Gas Permeability	_____	<0.03ml/
Radon Diffusion	_____	5.0x10 ⁻¹⁴ M ² /sec

PACKAGING & COVERAGE

Hydroprufe 8000 is supplied in 1.05 x 28.6 M rolls. Hydroprufe Primer is supplied in 5 ltr and 25 ltr drums.

STORAGE

The membrane rolls must be stacked on end and stored in dry, well-ventilated buildings, out of direct sunlight or other major sources of heat. Storage conditions should be adjusted before application to bring the temperature of the rolls to within the application range specified.

HEALTH & SAFETY

Please refer to separate Material Safety Data Sheet.

The information provided in this data sheet is intended for general guidance only and is given in good faith based on Premcrete's current knowledge and experience. No warranty in respect of fitness for a purpose, or any other liability whatsoever can be inferred from the information contained within this datasheet. Users should determine the suitability of the materials for their particular application and should always refer to the most recent issue of the product data sheet for the product concerned. All materials are supplied in accordance with Premcrete Sales Terms & Conditions (available upon request)



Hydroprufe LG

Liquid Applied Gas Membrane

DESCRIPTION

Hydroprufe LG is an elastomeric, one-part polymer modified liquid that dries to form a flexible, black membrane. This single part high-performance product is suitable for Gas proofing, Damp proofing and Waterproofing of vulnerable concrete structures.

USES

Hydroprufe LG is designed for both horizontal and vertical application on substructures and basements. It is suitable for application onto both new structures and existing concrete or masonry to provide a seamless membrane. It can also be applied where there is complex Gas and Damp proofing details.

ADVANTAGES

- Due to rapid drying properties installation is quick.
- Low permeability to Methane, Carbon Dioxide and Radon gases
- Can be used as a vertical and horizontal damp proof membrane
- Will provide a seamless coating, therefore eliminating any weaknesses within the membrane.
- Non-toxic water based liquid
- May be painted or screeded over

TYPICAL PROPERTIES

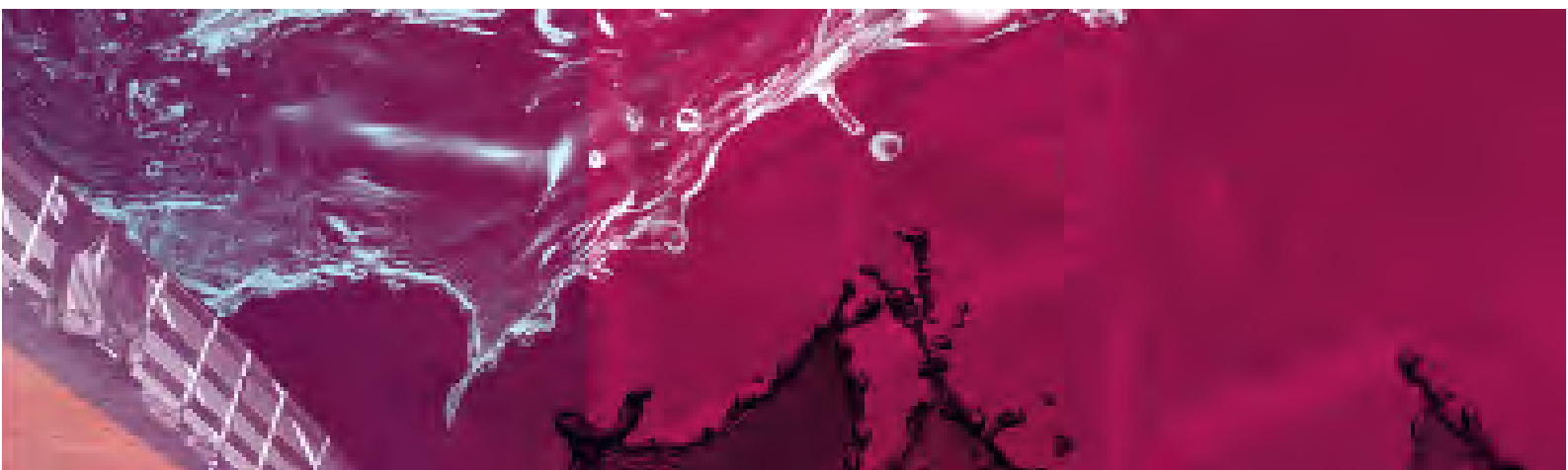
Property	Values
Liquid Colour	Blue or Grey
Appearance	Dries as Black coating
Curing Time	24-48 Hours
Methane Permeability	0.00864 ml/m ² /day
Adhesive to Concrete	>1.1N/mm ²
Elongation ASTM D2370	>100%
Water Penetration	No Penetration - 3.0 bars
Temperature Range During Application	>5C

PROCEDURE

Surface Preparation: Surfaces must be clean and free from any surface contamination, such as Oil and Paint. The surface should be smooth and free from any excessive surface undulations. If necessary the substrate should be repaired using a suitable Premcrete concrete repair product. Any standing water must be removed.

Service penetrations must be sealed using a suitable Preformed Top Hat Unit.

Application: Hydroprufe LG is supplied as a ready to use liquid. The liquid must be stirred for 5 minutes before application using a slow speed paddle mixer. Mixing may also be required during use. Hydroprufe LG can be applied by brush, roller or airless spray. Construction joints, and wall-floor junctions should be coated 100mm either side of the joint with the Hydroprufe LG at a coverage of 0.5ltr/m², and the



Hydroprufe Reinforcing Tape should be used to bridge the joint.

Hydroprufe LG is a two-coat application and each coat should dry fully before applying the following coat—approximately 2-3 hours depending on temperature. Successive coats should be applied at right angles to the previous coat to ensure complete coverage of the substrate.

When applied to an external face of a substructure the membrane must be covered the Premcrete Protection Board 600.

Equipment Cleaning: Clean equipment using Premcrete cleaning solvent prior to the material curing.

PACKAGING

Hydroprufe LG is supplied in 20 ltr containers.

COVERAGE

Each 20 ltr unit of Hydroprufe LG will cover 20 M2 with the recommended two-coat application.

STORAGE

Store in dry conditions out of direct sunlight at temperatures between 5C and 25C. Providing the Hydroprufe LG is not subjected to temperatures below 5C in transportation or storage they will have a shelf life of 12 months.

LIMITATIONS

Do not apply to uncured surfaces.

Do not apply at temperatures less than 5C.

HEALTH & SAFETY

Please refer to the material safety datasheet for additional information.

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Hydroprufe 9000

High Performance Gas Resistant Membrane

DESCRIPTION

HYDROPRUFE 9000 is a high performance reinforced, polyethylene gas resistant membrane with a 12 micron aluminium foil core that protects structures from the ingress of Methane, Carbon Dioxide and Radon. This has been specifically designed to conform with the latest guidance documents. Due to its unique composition the membrane is extremely robust and flexible and therefore easy to install on site. The membrane also provides protection from damp and therefore there is no need to install a separate DPM.

USES

Hydroprufe 9000 is designed to protect structures and occupants from dangerous gases that may exist in the ground conditions. It is laid beneath concrete to act as a gas resistant membrane whilst also acting as an effective damp proof membrane.

PROCEDURE

Surface Preparation: When applied beneath poured concrete slabs the sub-base should be well compacted and blinded with sand to prevent the membrane being punctured by any sharp protrusions. If the membrane is to be applied to the top face of a concrete slab then the concrete should be smooth without any excessive surface undulations.

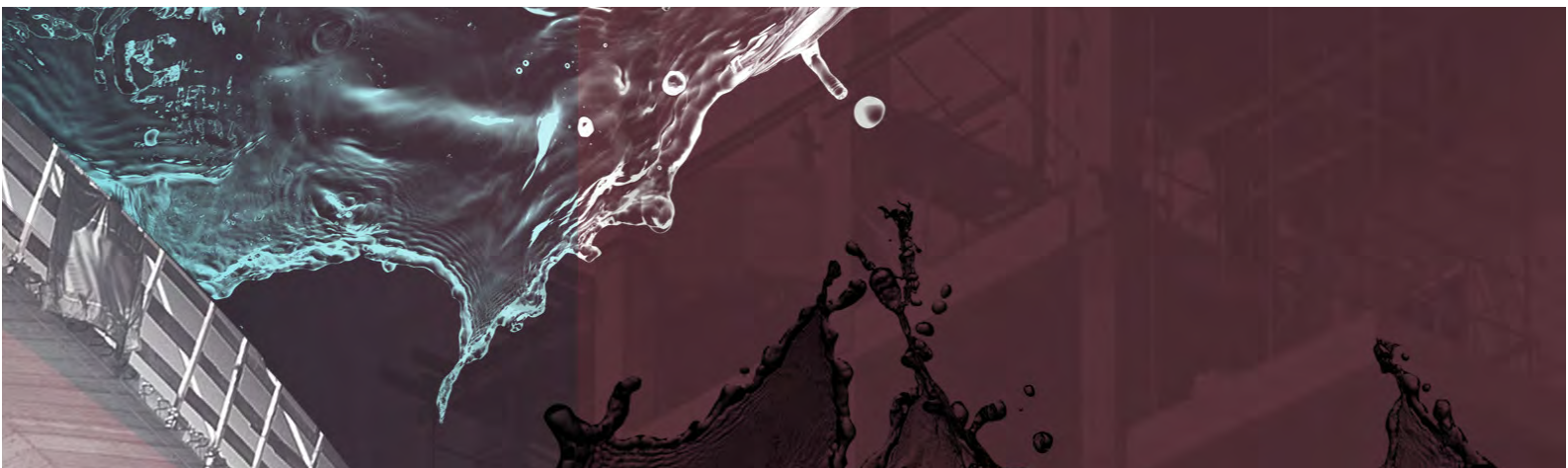
TYPICAL PROPERTIES

Property	Value
Thickness	0.4mm
Weight	0.37 Kg/M ²
Colour	Green/Silver
Nail Tear Resistance	160 N
Moisture/Vapour Transmission Rate	<0.01g/M ² /24 hr
Methane Permeability	7.799 x 10 ⁻¹² Kg/M ²

COMPLIANCE

Hydroprufe 9000 is approved by the BBA certificate No. 12/4957





REGULATIONS COMPATIBILITY TABLE

	CIRIA 665 Characteristic Situation 2	CIRIA 665 Characteristic Section 3-6	BS8485 Characteristic Section 2	BS8485 Characteristic Section 3-6	BRE 211 Radon	NHBC Amber 1	NHBC Amber 2
Methane	/	/	/	/	N/A	/	/
Carbon Dioxide	/	/	/	/	N/A	/	/
Radon	N/A	N/A	N/A	N/A	/	N/A	N/A

Application: Hydroprufe 9000 should be loose laid to the prepared area without puncturing the membrane, taking care to leave sufficient length to lap into any DPC detail. Adjacent sheets should be lapped by a minimum of 150mm and sealed using HCR Butyl Tape and then sealing the top of the membrane using HCR Girth Tape.

Any pipe penetrations, or other slab penetrations should be sealed using a Hydroprufe Top-hat or other sealing piece to ensure complete continuity of the gas-resistant system.

PACKAGING & COVERAGE

Hydroprufe 9000: 2 M x 50M.
HCR Butyl Tape: 30 mm x 30 M.
HCR Butyl Tape : 95mm x 50 M
HCR Girth Tape: 100 mm x 33 M.

STORAGE

Store in dry conditions at temperatures between 10°C and 25°C. Do not expose to freezing conditions.

HEALTH AND SAFETY

Please refer to separate Material Safety Datasheet.

The information provided in this data sheet is intended for general guidance only and is given in good faith based on Premcrete's current knowledge and experience. No warranty in respect of fitness for a purpose, or any other liability whatsoever can be inferred from the information contained within this datasheet. Users should determine the suitability of the materials for their particular application and should always refer to the most recent issue of the product data sheet for the product concerned. All materials are supplied in accordance with Premcrete Sales Terms & Conditions (available upon request)

Appendix E.2 Project Specific Detail Drawings

NOTES

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This drawing must be read in conjunction with the relevant datasheets and BS8102:2009.

This drawing has been prepared as a guide to assist with the installation of the products.

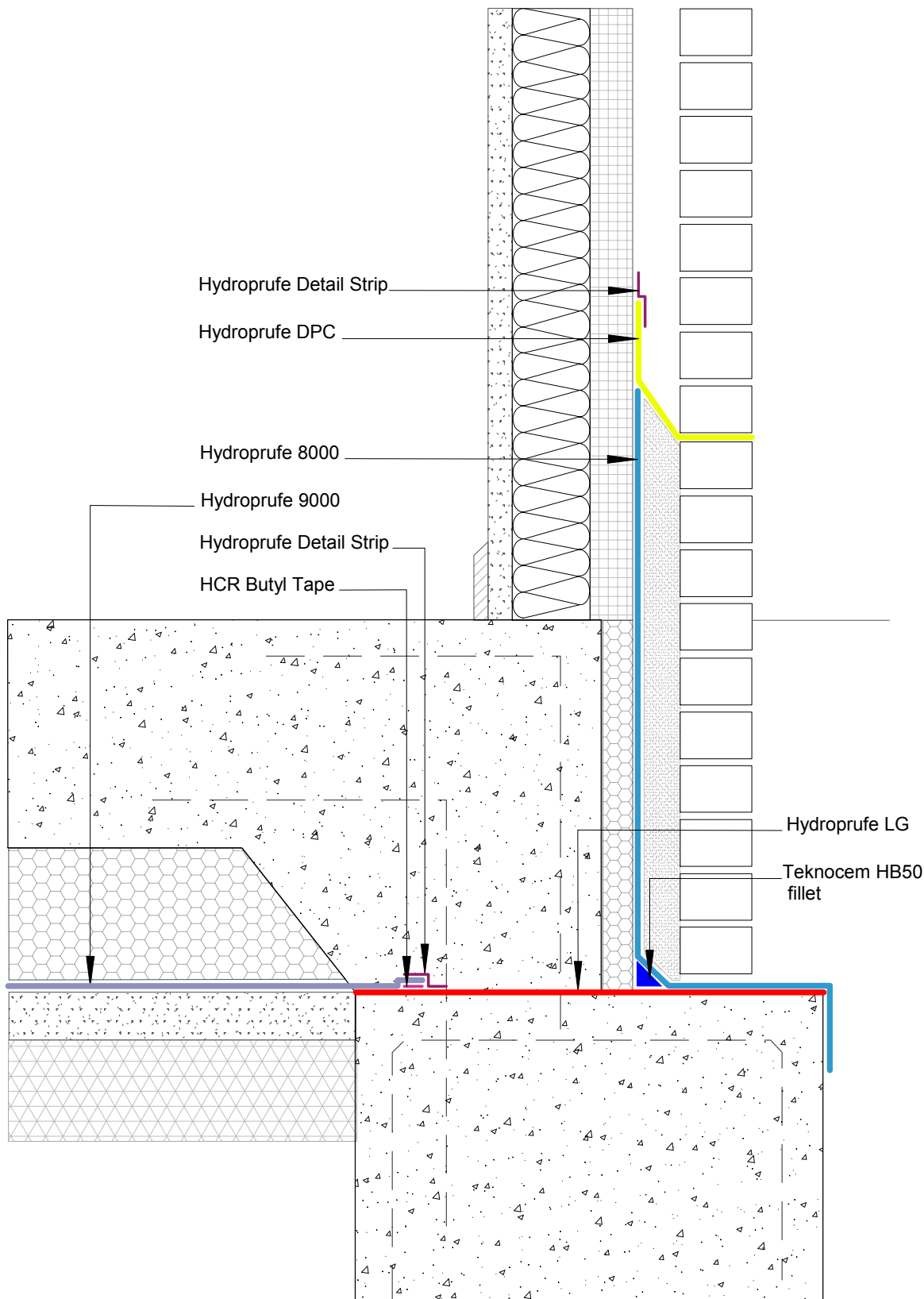
This drawing requires the approval of the designer of the structure.

It is the responsibility of the designer to ensure that any design decisions, made by others that have an impact on the waterproofing design are brought to the attention of the waterproof designer.

It is the responsibility of the designer of the structure to ensure that the details shown on this drawing match the construction drawings.

Hydroseal Sealer to be applied to all surfaces prior to installing Hydroflow HP

Premtard retarder to be applied to construction joints in Hydrocrete Concrete immediately after pouring concrete



DRAFT

Not for Construction,
for discussion only

This drawing is designed to achieve the following environment in accordance with BS 8102: 2009

GRADE

CLIENT
KENWARD
GROUNDWORKS

PROJECT
PORCELANOSA, READING

DRAWING NO:
365001

REVISION:
A

TITLE
DETAIL SHOWING GASPROOFING TO SLAB EDGE

DATE:
18/01/17

SCALE:
NOT TO SCALE

DRAWN:
HLM

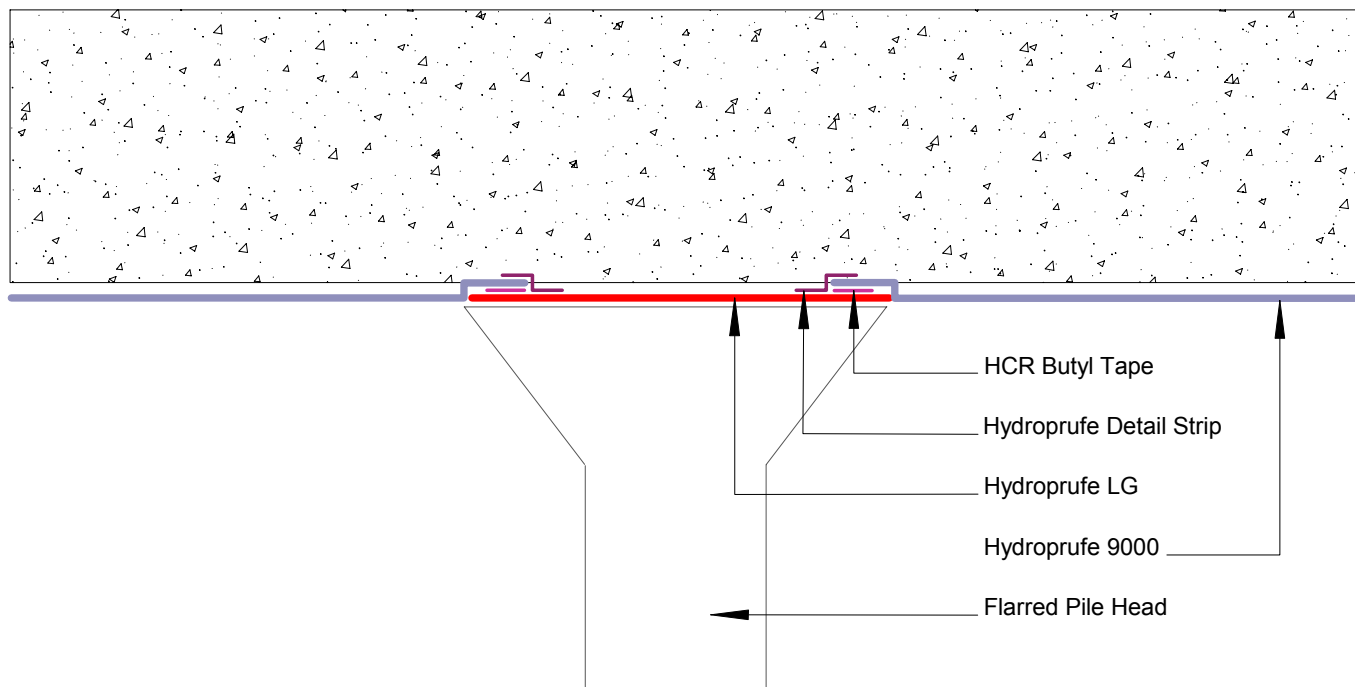
CHECKED:
CT

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By FIS Products

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Eastleigh | Hampshire | SO53 4AR
Tel: 02380 276166 | sales@fisproducts.co.uk
www.fisproducts.co.uk



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Hydrosal Sealer to be applied to all surfaces prior to installing Hydroflow HP

Premtard retarder to be applied to construction joints in Hydrocrete Concrete immediately after pouring concrete

DRAFT

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for discussion only

CLIENT
KENWARD GROUNDWORKS

PROJECT
PORCELANOSA, READING

DRAWING NO:
365002

REVISION:
A



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Eastleigh | Hampshire | SO53 4AR
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www.fisproducts.co.uk

TITLE
SECTION SHOWING GAS PROOFING AT PILE DETAIL

DATE:
19/01/17

SCALE:
NOT TO SCALE

DRAWN:
HLM

CHECKED:
CT

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GRADE

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It is the responsibility of the designer of the structure to ensure that the details shown on this drawing match the construction drawings.

Hydrosal Sealer to be applied to all surfaces prior to installing Hydroflow HP

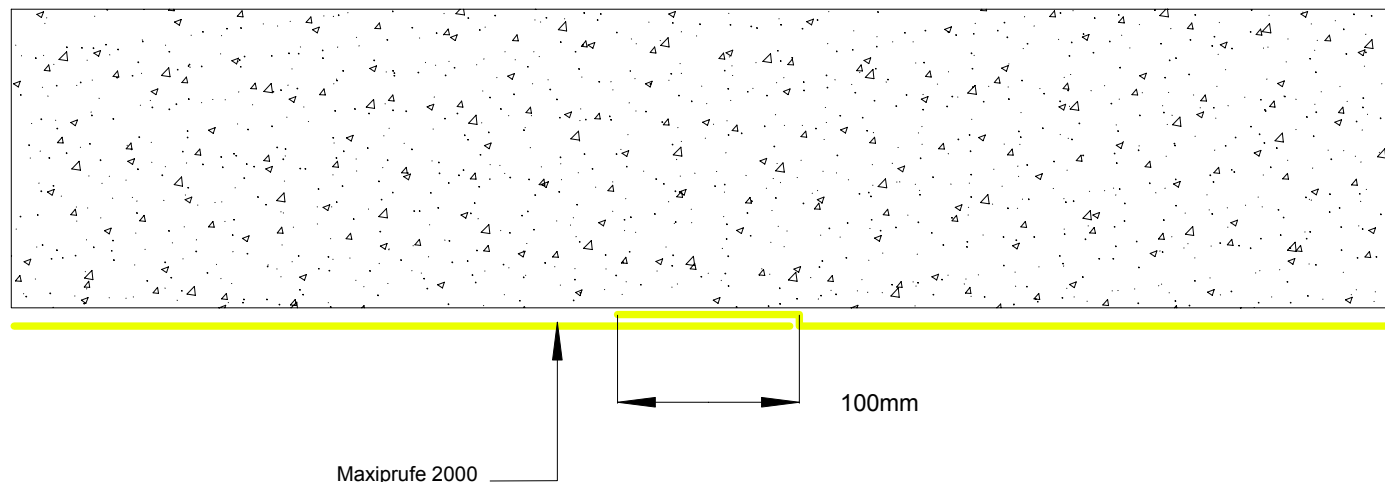
Premtard retarder to be applied to construction joints in Hydrocrete Concrete immediately after pouring concrete

DRAFT

Not for Construction,
for discussion only

This drawing is designed to achieve the following environment in accordance with BS 8102: 2009

GRADE



CLIENT
KENWARD
GROUNDWORKS

PROJECT
PORCELANOSA, READING

DRAWING NO:
365003

REVISION:
A



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www.fisproducts.co.uk

TITLE

TYPICAL SECTION SHOWING MAXIPRUF 2000 LAP JOINT

DATE:
19/01/17

SCALE:
NOT TO SCALE

DRAWN:
HLM

CHECKED:
CT

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This drawing has been prepared as a guide to assist with the installation of the products.

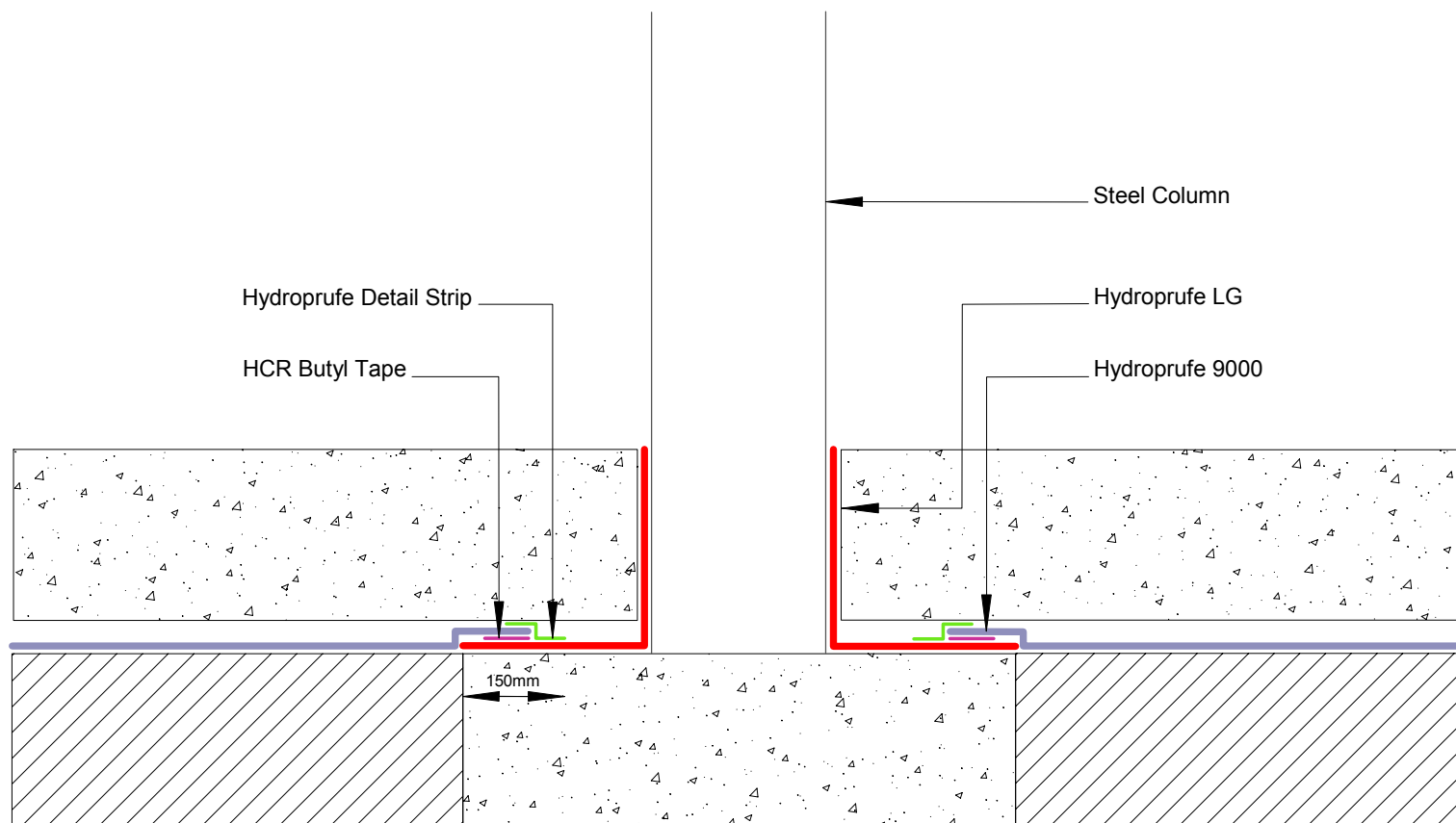
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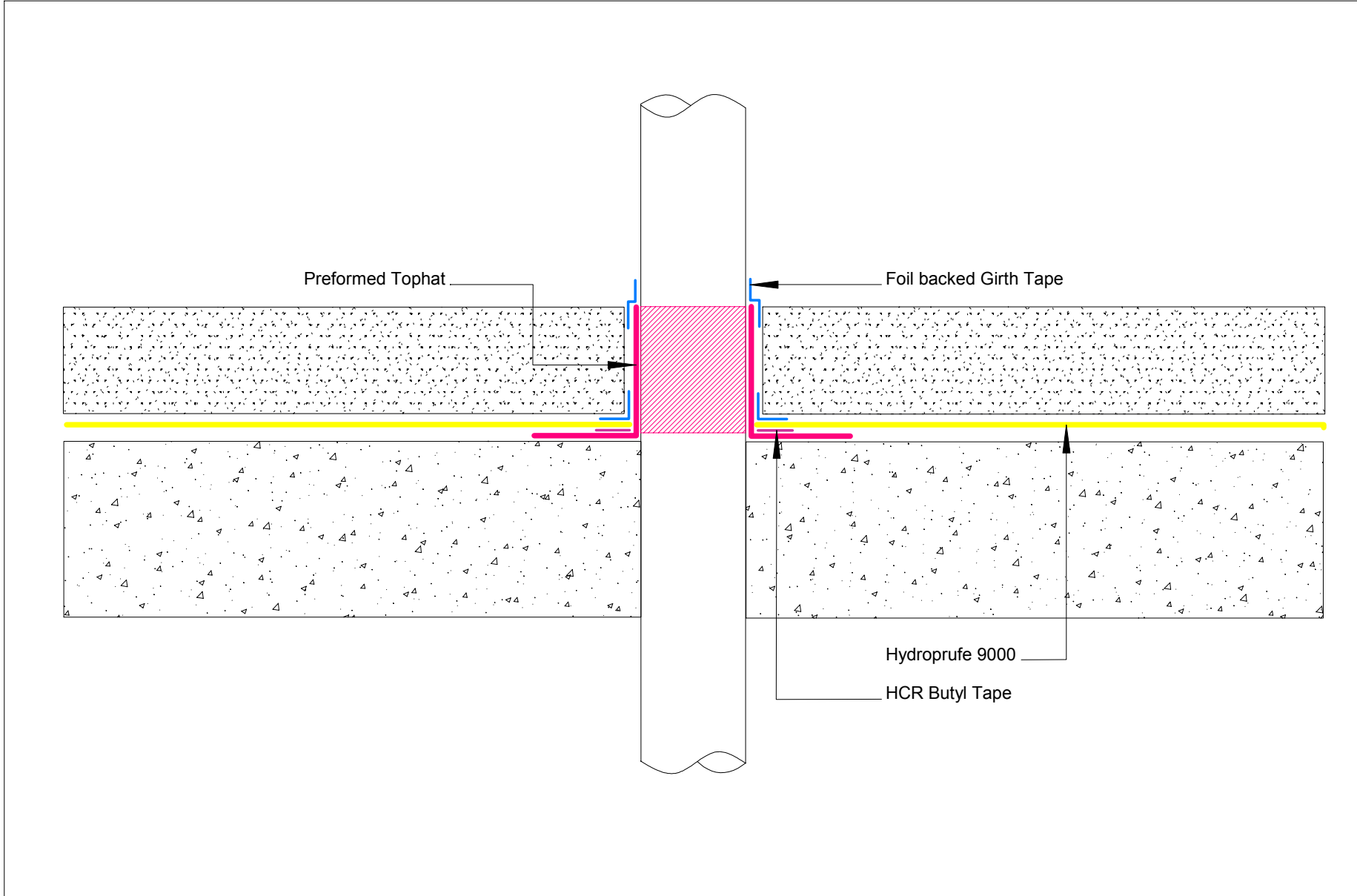
It is the responsibility of the designer of the structure to ensure that the details shown on this drawing match the construction drawings.

Hydrosel Sealer to be applied to all surfaces prior to installing Hydroflow HP

Premtard retarder to be applied to construction joints in Hydrocrete Concrete immediately after pouring concrete



CLIENT KENWARD GROUNDWORKS	PROJECT PORCELANOSA	DRAWING NO: 365004	REVISION: A	 By FIS Products Seymour House Mayflower Close Chandlers Ford Eastleigh Hampshire SO53 4AR Tel: 02380 276166 sales@fisproducts.co.uk www.fisproducts.co.uk	
TITLE Section showing Waterproofing detail around Steel Column at Lower Ground Floor		DATE: 06/02/17	SCALE: NOT TO SCALE		
		DRAWN: HLM	CHECKED: TDW	© 2017	



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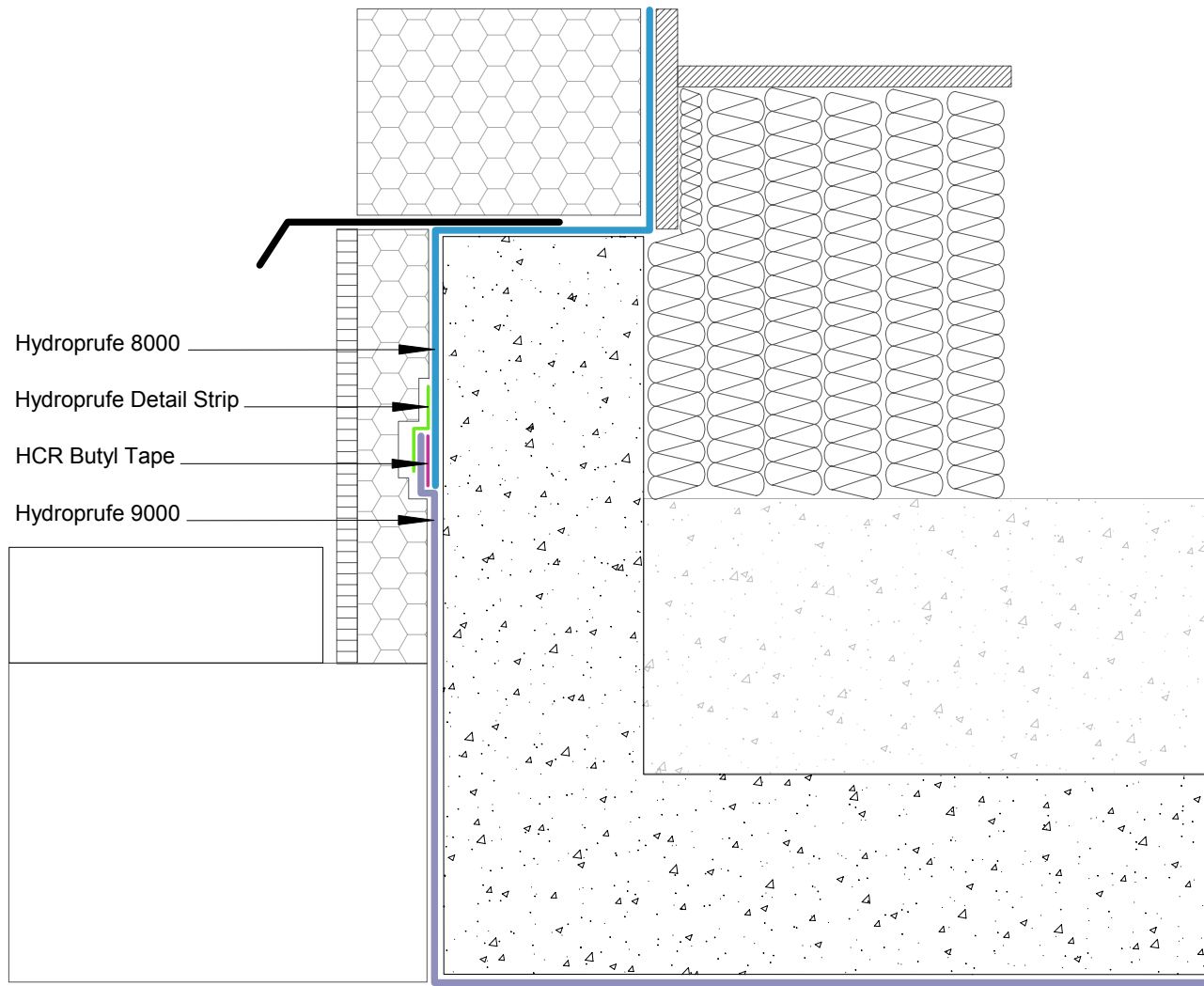
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Hydroséal Sealer to be applied to all surfaces prior to installing Hydroflow HP

Premtard retarder to be applied to construction joints in Hydrocrete Concrete immediately after pouring concrete

CLIENT KENWARD GROUNDWORKS	PROJECT PORCELANOSA	DRAWING NO: 365005	REVISION: A	 By FIS Products Seymour House Mayflower Close Chandlers Ford Eastleigh Hampshire SO53 4AR Tel: 02380 276166 sales@fisproducts.co.uk www.fisproducts.co.uk	
TITLE Section showing Waterproofing detail around Steel Column at Lower Ground Floor		DATE: 06/02/17	SCALE: NOT TO SCALE		
		DRAWN: HLM	CHECKED: TDW	© 2017	



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Hydroseal Sealer to be applied to all surfaces prior to installing Hydroflow HP

Premtard retarder to be applied to construction joints in Hydrocrete Concrete immediately after pouring concrete

CLIENT
KENWARD GROUNDWORKS

PROJECT
PORCELANOSA

DRAWING NO:
365006

REVISION:
A

TITLE
SECTION THROUGH SLAB EDGE DETAIL

DATE:
07/02/17

SCALE:
NOT TO SCALE

DRAWN:
HLM

CHECKED:
TDW

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Eastleigh | Hampshire | SO53 4AR
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Appendix E.3 Quality Control Regime

Premcrete Training Register

Project_____ **Responsible Person**_____

Date	Company	Name	Products



Project Name:
Company:
Check completed by:

Location:
Products installed by:
Notes:
Date:

Liquid Coating System

Substrate prepared:
Substrate primed:
1st coat applied:
2nd coat applied:
Aggregate applied:

Sheet Membrane System

Substrate prepared:
Substrate primed:
Lap-joints sealed correctly:
Protection board installed:
Membrane puncture-free:
Hydrostop BR bonded with Hydrostop WSM:
Hydrostop BR nailed at 300mm centres:
Hydrostop BR correctly butt-jointed:

Hydrocrete Watertight Concrete

Scabbled/retarded:
Hydrostop BR bonded with Hydrostop WSM:
Hydrostop BR correctly butt-jointed:
Hydrostop BR nailed at 300mm centres:
Tie-holes plugged using Hydrostop BR:
Tie-holes sealed using Tie-Hole Sealer:

Hydroflow HP Cavity Drain System

Substrate prepared:
Substrate sealed using Hyroseal Sealer:
Hydroflow fixed to wall at 1 metre centres:
Hydrochannel / Centredrain:
Hydrochannel Outlets/Jetting points installed:
Hydroflow HP 20m installed to floor area:

Combined Hydrocrete / Membrane System

Substrate prepared:
Substrate primed:
Lap-joints sealed correctly:
Construction joints scabbled/retarded:
Hydrostop BR bonded with Hydrostop WSM:
Hydrostop BR nailed at 300mm centres:
Hydrostop BR correctly butt-jointed:
Tie-holes sealed using Tie-Hole Sealer:
Tie-hole membrane patches applied:

Product Training and Quality Control Inspection Regime

FIS Construction Products operate a robust Training and Quality Control regime to ensure that the products and systems that we design and supply are installed correctly and in accordance with all technical datasheets and project specific detail drawings.

Training

Upon commencement the FIS Project Manager that has been assigned to your project will spend as much time as required to ensure that your operatives are fully conversant with the design produced for the project and how the products are to be installed. The technical datasheets are explained to the operatives and any special characteristics and/or limitations of the product are specifically highlighted. A training register is compiled listing the named people that are trained for the use of the products on your site. This is stored in the Premcrete Site QC File which is supplied by FIS at the beginning of the project.

Site Quality Control

Throughout the installation of the waterproofing products/system your FIS Project Manager will visit site as many times as is required to satisfy himself that the level of workmanship is in accord with what is required for a full warranty to be issued upon completion. Your FIS Project Manager should be notified at least 2 days before every concrete pour, making reference to gridlines etc so that a log can be compiled. The FIS Project Manager may make the decision that photographs displaying installed products will be acceptable in which case they should be sent and approved before proceeding.

During the Quality Control Site Visits the FIS Project Manager will carry out a series of spot checks to ensure the products are installed correctly, a Waterproofing QC Report will then be completed for each inspection and the installing contractor will retain a copy in the Premcrete QC File on site.

The Training and Quality Control regime that FIS employs does not negate the responsibility that the installing Contractor has towards maintaining high levels of workmanship at all times.

Appendix E.4 Warranties



25 YEAR PERFORMANCE SYSTEM WARRANTY

We hereby confirm to you (as beneficiary) that the installed Premcrete Waterproofing System, made up of the following listed components will perform in accordance with the appropriate technical datasheets (subject to the terms and conditions):

System Components:

_____("Product(s)")

Which has been installed at _____

And completed on: - _____

Name of beneficiary: _____

For Premcrete

Name: _____

Signature: _____

Date: _____



25 Year Performance System Warranty Terms & Conditions

- i. Premcrete (The Company) warrants that if within 25 years of the date of supply (as evidenced by the date of invoice) the Premcrete Waterproofing System allows the migration of visible water beyond that which the system is designed to prevent (as assessed in accordance with the Premcrete technical literature or other written communication relating to the system components or the job in question) and the Grade of Waterproofing Protection (in accordance with BS 8102:2009 Table 2) that was outlined in the Company's waterproofing design, is not achieved then the Company will replace or repair the Product subject to these terms and conditions.
- ii. The liability of the Company shall be limited to the cost of the defective Product or the cost of carrying out any necessary repairs to the Product supplied, whichever is the smaller.
- iii. The Company shall have no liability if there is evidence of the Products not having been installed properly, it being damaged during or after installation, not maintained in accordance with the manufacturer's guidelines or as a result of a design failure of the structure to which the Product has been installed. Specifically the Company shall have no liability if the migration of visible water is due to poor compaction of the concrete or cracks in the structure greater than 0.3mm wide
- iv. The Company shall have no liability if the Product has been damaged as a result of fire, explosion, vibration, structural movement, acts of God or any other causes that are not a direct consequence of the failure of the installed Product to perform in accordance with the Product's relevant technical datasheets.
- v. This warranty is to be read in conjunction with the Product's technical datasheets of the components that form the Premcrete system.
- vi. Remedial work, if deemed necessary, will be carried out by and at the expense of the Company, in the way in which the Company directs. The Company shall not be responsible for securing any necessary approvals from the building occupants who may be affected by the repairs or for removing any obstructions from the affected area to enable the Company to carry out such remedial work.
- vii. The Company shall have no liability in contract or tort for any direct, indirect or consequential loss as a result of the failure of any of the Products or the warranties herein and all liability is hereby expressly excluded. Nothing in this clause shall exclude liability for death or personal injury.
- viii. The Company's liability is subject to (a) any failure in any of the Products being notified to the Company within 14 days of discovering the failure and (b) all invoices in respect of the Products having been paid in full.
- ix. This warranty will become null and void if any repairs to the installed Premcrete waterproofing system are made without prior consent from Premcrete.
- x. The warranty relates to the property and is transferable should the property change ownership.
- xi. This warranty shall be construed in accordance with English law and the English courts shall have exclusive jurisdiction.



26 Whitehall Road | Leeds | West Yorkshire | LS12 1BE
Tel: 0800 619 1619 | Email: sales@premcrete.com | www.premcrete.com
Premcrete is a trading name of Seymour Global Ltd



To whom it may concern

We act as insurance advisers to **LST Partnership LLP and Seymour Global Ltd (T/As FIS Construction Products)**
and confirm that we have arranged the following insurances on their behalf:

Insurer	HCC International Insurance Company PLC
Period of cover	12 months from 6 th May 2016
Policy number	P14D591429

Professional Indemnity

Indemnity	£10,000,000 any one claim, defence costs and expenses in addition
Jurisdiction / Geographical Limits	Worldwide excluding USA/Canada
Indemnity to principals	Included
Business Activities	Design & construction of waterproofing and substructure protection systems.

Policy cover is subject to the full terms and conditions of the policy wording at all times. If you have any queries, please do not hesitate to contact the undersigned.

Yours faithfully,

Ben Fuller
Milburn Insurance Brokers
Telephone: 01245 211 800
Email ben.fuller@milburninsurance.co.uk

Appendix E.5 GeoShield Brochure



GEOSHIELD LIMITED

promote a risk based approach to the application of ground gas protection systems,
the venting & installation of primary barriers and the
verification of barriers in accordance with BS8485:2015 & CIRIA 735 (2014).

Independent Verification Programs are now an industry requirement, to learn more call

ON FREE PHONE 0800 689 3167

alternatively info@geoshield.co.uk



GEOSHIELD LIMITED

Unit 21A, Kinsley Industrial Estate, Hoyle Mill Road,
West Yorkshire WF9 5JB

www.geoshield.co.uk

Direct Mobile: +44 (0) 7462 546926 / +44 (0) 7917 134410

Company Reg: 9455588



INDEPENDENT TESTING & VERIFICATION

FOR

GROUND GAS PROTECTION SYSTEMS



COMPLIANT WITH BS8485:2015 & CIRIA 735 (2014)



In 2015 the British Standard for Good Practice on the Testing and Verification of Protection Systems for Buildings against Hazardous Ground Gases was updated, BS8485: 2015 supersedes all previous guidance. BS 8485:2015 operating alongside the CIRIA 735 code of practice states Independent Verification & Testing Programs are as important as the design & installation process.

Many Contractors are unaware of the advances put forth by the British Standards & CIRIA and to how projects may fail to meet current requirements; GeoShield Ltd ensure contracts are in accordance with:

- **BS8485 2015**
- **CIRIA 735 (2014)**
- **CL:AIRE RB17 (2012)**

BS8485 2015 sets the codes of practice which govern the installation of gas proof membranes. Dependent on the various project risks and criteria independent inspection is mandatory.

GeoShield provides all your verification requirements from inception to completion.

An Independent Testing and Verification program is required as an integral part of the project strategy & back-up documentation and be included in the final completion process and hand-over package.



GEOSHIELD VERIFICATION PROGRAM

CIRIA 735 states that the verification plan (which includes consideration of the need for any integrity testing) becomes an integral part of the design of the gas protection system.

As each project is unique in terms of size, construction type and ground gas protection system the GeoShield service of Verification follows the most up to date industry guidelines, with a focus on 6 obligatory components, whilst creating a bespoke, distinct & precise solution for the client:

- The Verification is 100% independent and has no conflict of interest with the membrane manufacturer, installer or client
- A Verification Plan is provided as early as possible in the project build up. This involves all parties in the application of the gas membrane.
- Ventilation should not be over looked and must be considered as an effective first line of defense
- Verification should be considered as important as installation, design and material choice. 'Any Ground Gas Protection Membrane is only as good as its installation'
- The degree and intensity of independent verification should reflect the assessed level of risk, the nature of the gas protection system, the quality of the product(s) and the competence of the installer.
- Follow on trades must be made aware of the consequences of misuse regarding the Gas Membrane. The Verification Plan will highlight these items to the relevant parties.

VERIFICATION STRATEGY

Good practice for verification of ground gas protection measures has been brought together within a new key guidance document (CIRIA C735, 2014). This guidance is written for designers, installers, verifiers and regulators and clearly defines that Verification is as important as design and installation and should not be ignored. A risk based approach to verification is required and an independent third party is to be used for verification to avoid conflicts of interest.

The Verification Monitoring Process included in the Strategy adheres to the following:

- Regular structured reporting to all relevant parties
- Continuous evaluation of the membrane performance
- Competency evaluation of the installation process & application team
- Applications are correct in accordance with project specific specifications & design details
- The logging & reporting of any conflicting issues, concerns, hindrances & delays restricting the correct application of the Ground Gas Protection System.

VERIFICATION REPORT

The GeoShield Verification report is a user friendly document published in hard copy, cloud link, instant email & flash drive. The final report is a concise document that relates to the history of the Ground Gas Protection System application process. The final report will have:

- A description of the inspection regime
- A description of the elements of the ground gas protection system
- A presentation of the material specifications etc.
- Dates of inspection, inspection staff present, weather conditions & the surrounding trades activity
- Specifics relating to the level of training, competency & accuracy of the installation team
- Installation photos along sectors & grid lines
- Recognized defects & repairs along sectors & grid lines
- Areas inspected along sectors & grid lines
- Areas of limitation: areas unable to be inspected identified and noted

TESTING

The testing protocol is determined at the Verification Plan stage, at this point the risk to health is evaluated and the specific system performance tests are decided, these may include:

- Visual Records
- Non-Destructive Smoke Testing
- Non-Destructive Compressed Air Lance Test
- Destructive Joint Testing
- Non-Destructive Tracer Gas
- Dielectric Porosity Testing



Appendix F Gas Protection Validation Report



GEOSHIELD Verification Report



PROJECT REFERENCE: GEO1001700/KC/P

PROJECT: Porcelenosa: Kenwood Construction

PROJECT ADDRESS: 21 Rose Kiln Lane

Reading

RG1 6SP

MEMBRANE SPECIFICATION: Gas membrane to specification BS8485 2015

Installed to CIRIA 735

Hydroprufe 9000

Hydroprufe 8000

Dual Tape

Girth Tape

Foil backed detailing tape

Hydroprufe LG Liquid Gas Membrane

Verification Plan will not be legally valid until payment is made.



GEOSHIELD Verification Report



MEMBRANE SPECIFICATION:

DESIGN DETAILS:

31363/5002/003 C1 Foundations and ground floor plan

31363/5002/020 C2 Substructure Sections

365001 Rev A

365002 Rev A

365003 Rev A

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GEOSHIELD Verification Report



SURVEYOR:

Chris Kynman

VERIFICATION COMPANY:

GeoShield Limited

Hoyle Mill Road

Kinsley

West Yorkshire

WF9 5JB

CONTACT NUMBER:

07387 373 167

EMAIL ADDRESS:

Chris.kynman@geoshield.co.uk

ORDER NUMBER:

PER VISIT: YES:

☐

NO:

☐

PROJECT: YES:



NO:

☐

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GEOSHIELD Verification Report



CLIENT DETAILS

CLIENT CONTACT: Stephen Gatehouse

CONTACTS ROLE: Project Manager

MOBILE PHONE:

EMAIL ADDRESS:

CLIENT CONTACT:

CONTACTS ROLE:

MOBILE PHONE:

EMAIL ADDRESS

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GEOSHIELD Verification Report



APPLICATION TEAM LEADERS

APPLICATOR NAME: Tony Groves: Foreman

COMPANY: Nick Kenward Construction Limited

APPLICATOR TEL: 07730 575862

APPLICATOR EMAIL:

APPLICATOR NAME: Frank Holman

COMPANY: Nick Kenward Construction Limited

APPLICATOR TEL: 07917 688078

APPLICATOR EMAIL:

NOTES:

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GEOSHIELD Verification Report



AREA SURVEYED: Area: A/H - 1/3+

Floor slab

SITE CONDITIONS:

WEATHER: Overcast

TEMPERATURE: 10C

MEMBRANE TEMPERATURE: N/A

RELATIVE HUMIDITY: 63%

TIME: 8.30am- 1.00pm REPORT NUMBER: 001

DATE: 20th February 2017

ACCOMPANIED Tony Groves

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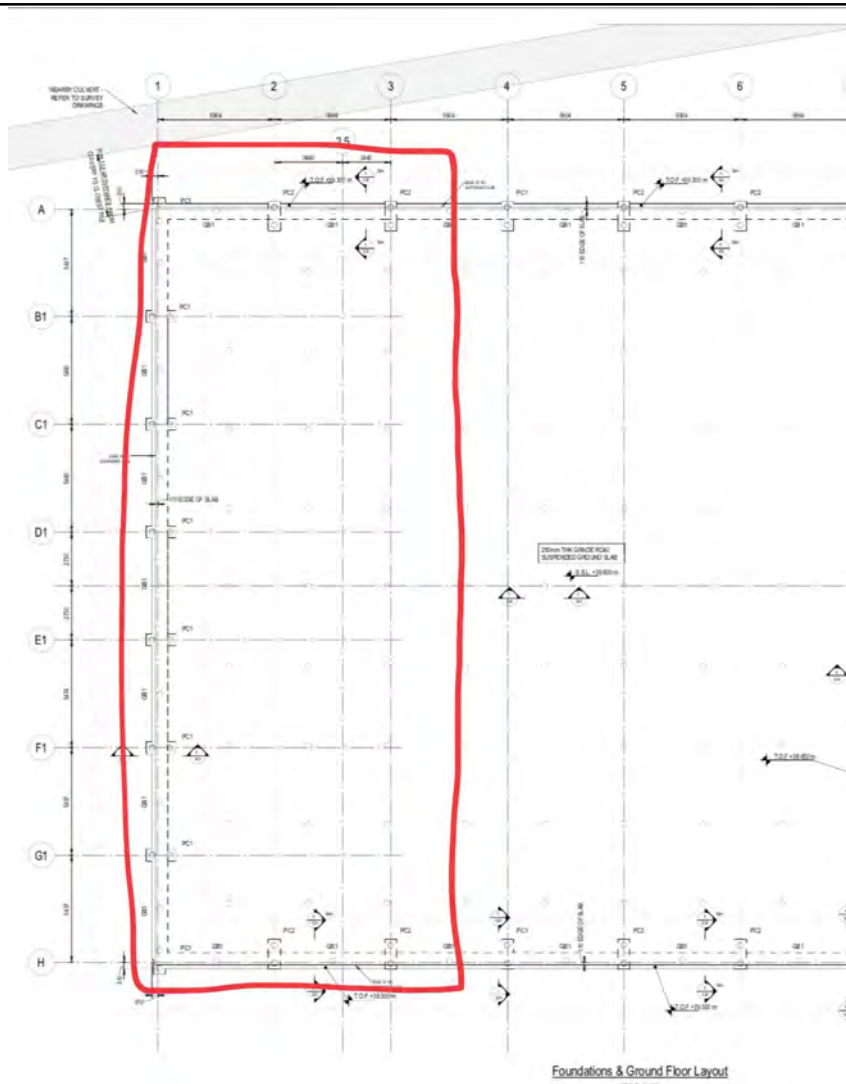
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GEOSHIELD Verification Report



VERIFICATION LAYOUT



Area: A/H - 1/3+



GEOSHIELD Verification Report



OVERVIEW PHOTOS



Sand blinding looking to H - 2

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GEOSHIELD Verification Report



OVERVIEW PHOTOS



View to A1 corner

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GEOSHIELD Verification Report



LIMITATIONS

SURVEY AREA:

Area: A/H - 1/3+

RESTRICTIONS AND LIMITATIONS:

All applications were available for Verification

Click to set image

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GEOSHIELD Verification Report



LIMITATIONS

SURVEY AREA:

RESTRICTIONS AND LIMITATIONS:

No limitations or restrictions

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GEOSHIELD Verification Report



VERIFICATION ITEM ONE

LOCATION/GRID LINE: Grid Line: A/H - 1

NOTES:

Application of Hydroprufe LG, 2 coats

Junction between ground beam and blinding: taped using girth tape.



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GEOSHIELD Verification Report



VERIFICATION ITEM ONE



Junction between ground beam and blinding: taped using girth tape.

Hydroprufe LG can also be clearly seen applied to specification

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GEOSHIELD Verification Report



VERIFICATION ITEM TWO

LOCATION/GRID LINE: Area: A/H - 1/3+

NOTES: General Application

Sand blinding to Specification

Dual tape



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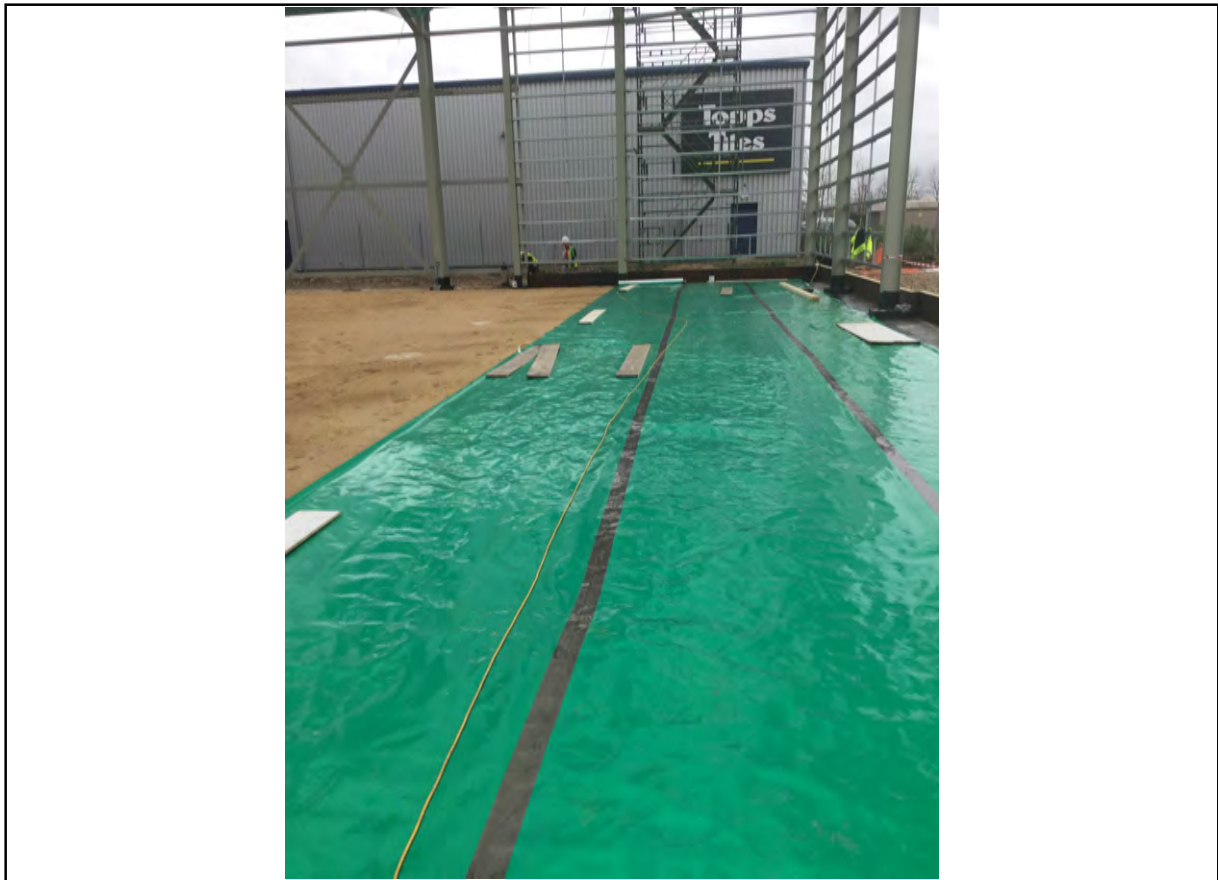
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GEOSHIELD Verification Report



VERIFICATION ITEM TWO



Girth Tape

View from D1 to H2

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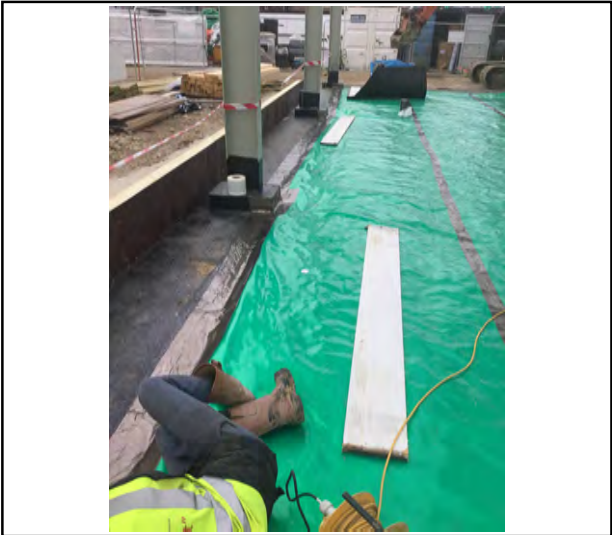
VERIFICATION ITEM THREE

LOCATION/GRID LINE: Area: A/H - 1/3+

NOTES: Detailing work

Pipe Penetration

Edge beam detail



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VERIFICATION ITEM THREE



300mm wide Detailing strip to seal Membrane to edge beam

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GEOSHIELD Verification Report



REMEDIATION LOG

Date	Nr	Remediation Description	Y/N
20th Mar	001	No remediation items	✓
20th Mar	001	Protection board still to fix	

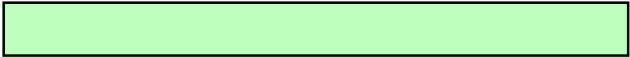
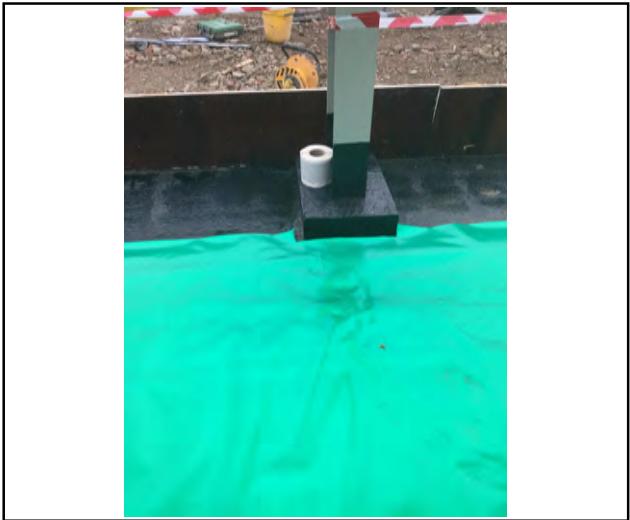
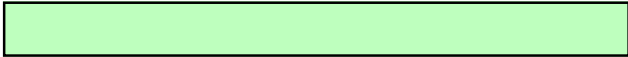
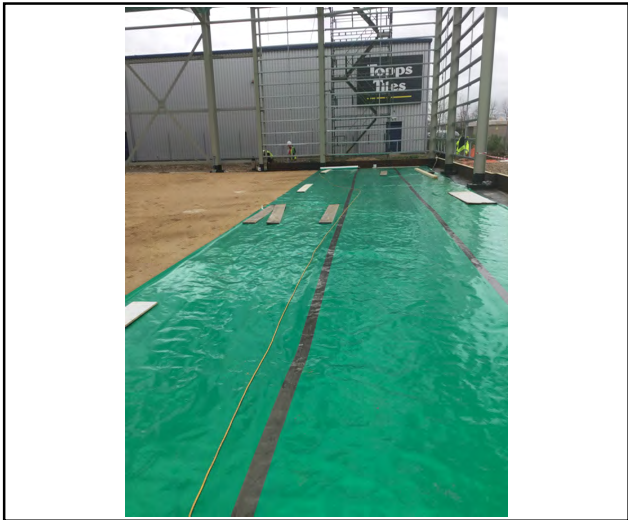
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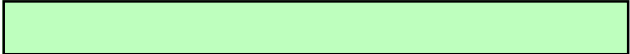
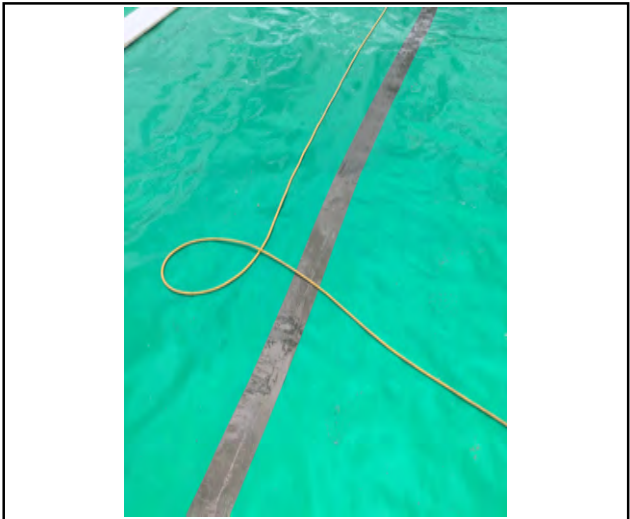
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ADDITIONAL PHOTOS



Additional GR Primer



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GAS MEMBRANE TESTING

VISUAL:	☐ YES	☒	☐ NO	☐	SMOKE TEST:	☐ YES	☐	☐ NO	☐
COMPRESSED AIR:	☐ YES	☐	☐ NO	☐	DILECTIC	☐ YES	☐	☐ NO	☐
DESTRUCTIVE:	☐ YES	☒	☐ NO	☐		☐ YES	☐	☐ NO	☐
OTHER:									

GRID LINE:	Area: A/H - 1/3+	☐
GRID LINE:		☐
GRID LINE:		☐
GRID LINE:		☐
GRID LINE:		☐
GRID LINE:		☐
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GRID LINE:		☐

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GEOSHIELD Verification Report



VERIFICATION SUMMARY

Internal vertical faces applied to Premcrete specification

Some minor remediations in the process of being completed

GEOSHIELD SIGNITURE:

DATE: 8th February 2017

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GEOSHIELD Verification Report



PROJECT REFERENCE: GEO1001700/KC/P

PROJECT: Porcelenosa: Kenwood Construction

PROJECT ADDRESS: 21 Rose Kiln Lane

Reading

RG1 6SP

MEMBRANE SPECIFICATION: Gas membrane to specification BS8485 2015

Installed to CIRIA 735

Hydroprufe 9000

Hydroprufe 8000

Dual Tape

Girth Tape

Foil backed detailing tape

Hydroprufe LG Liquid Gas Membrane

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GEOSHIELD Verification Report



MEMBRANE SPECIFICATION:

DESIGN DETAILS:

31363/5002/003 C1 Foundations and ground floor plan

31363/5002/020 C2 Substructure Sections

365001 Rev A

365002 Rev A

365003 Rev A

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GEOSHIELD Verification Report



SURVEYOR:

Chris Kynman

VERIFICATION COMPANY:

GeoShield Limited

Hoyle Mill Road

Kinsley

West Yorkshire

WF9 5JB

CONTACT NUMBER:

07387 373 167

EMAIL ADDRESS:

Chris.kynman@geoshield.co.uk

ORDER NUMBER:

PER VISIT: YES:

☐

NO:

☐

PROJECT: YES:



NO:

☐

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GEOSHIELD Verification Report



CLIENT DETAILS

CLIENT CONTACT: Stephen Gatehouse

CONTACTS ROLE: Project Manager

MOBILE PHONE: 07887983302 / 01553 776543

EMAIL ADDRESS: Stephengatehouse@chalcroft.co.uk

CLIENT CONTACT:

CONTACTS ROLE:

MOBILE PHONE:

EMAIL ADDRESS

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GEOSHIELD Verification Report



APPLICATION TEAM LEADERS

APPLICATOR NAME: Tony Groves: Foreman

COMPANY: Nick Kenward Construction Limited

APPLICATOR TEL: 07730 575862

APPLICATOR EMAIL:

APPLICATOR NAME: Frank Holman

COMPANY: Nick Kenward Construction Limited

APPLICATOR TEL: 07917 688078

APPLICATOR EMAIL:

NOTES:

NOTES:

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GEOSHIELD Verification Report



AREA SURVEYED: Area: A/H - 1/4

SITE CONDITIONS:

WEATHER: Overcast/Wet

TEMPERATURE: 08C

MEMBRANE TEMPERATURE: N/A

RELATIVE HUMIDITY: 63%

TIME: 8.30am- 9.30am REPORT NUMBER: 002

DATE: 23rd March 2017

ACCOMPANIED Tony Groves

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GEOSHIELD Verification Report



OVERVIEW PHOTOS



Overview premtech protection applied prior to pour

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OVERVIEW PHOTOS



Overview looking toward A1-3

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GEOSHIELD Verification Report



LIMITATIONS

SURVEY AREA:

Area: A/H - 1/4

RESTRICTIONS AND LIMITATIONS:

All applications were available for Verification

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GEOSHIELD Verification Report



LIMITATIONS

SURVEY AREA:

N/A

RESTRICTIONS AND LIMITATIONS:

No limitations or restrictions

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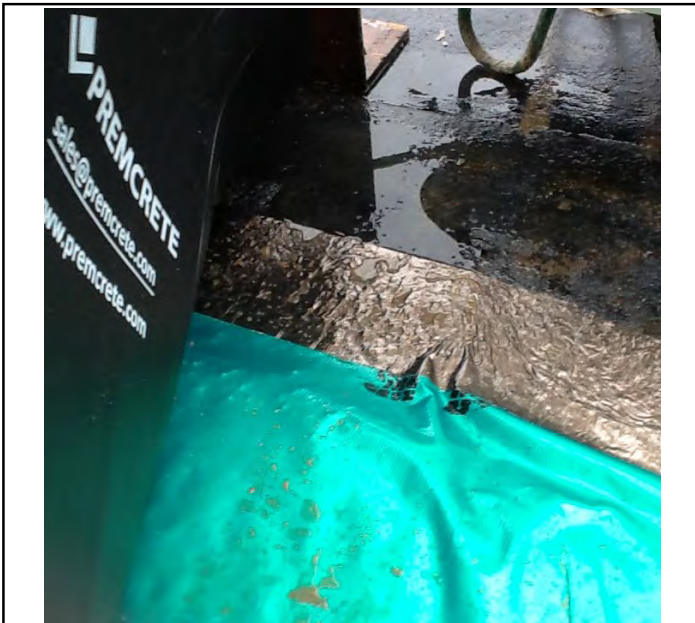
VERIFICATION ITEM ONE

LOCATION/GRID LINE: A-4

NOTES: Just prior to pour , protection lifted for inspection ,

Two views showing application of 300mm detailing tape to seal membrane to

Hydroprufe LG and edge beam



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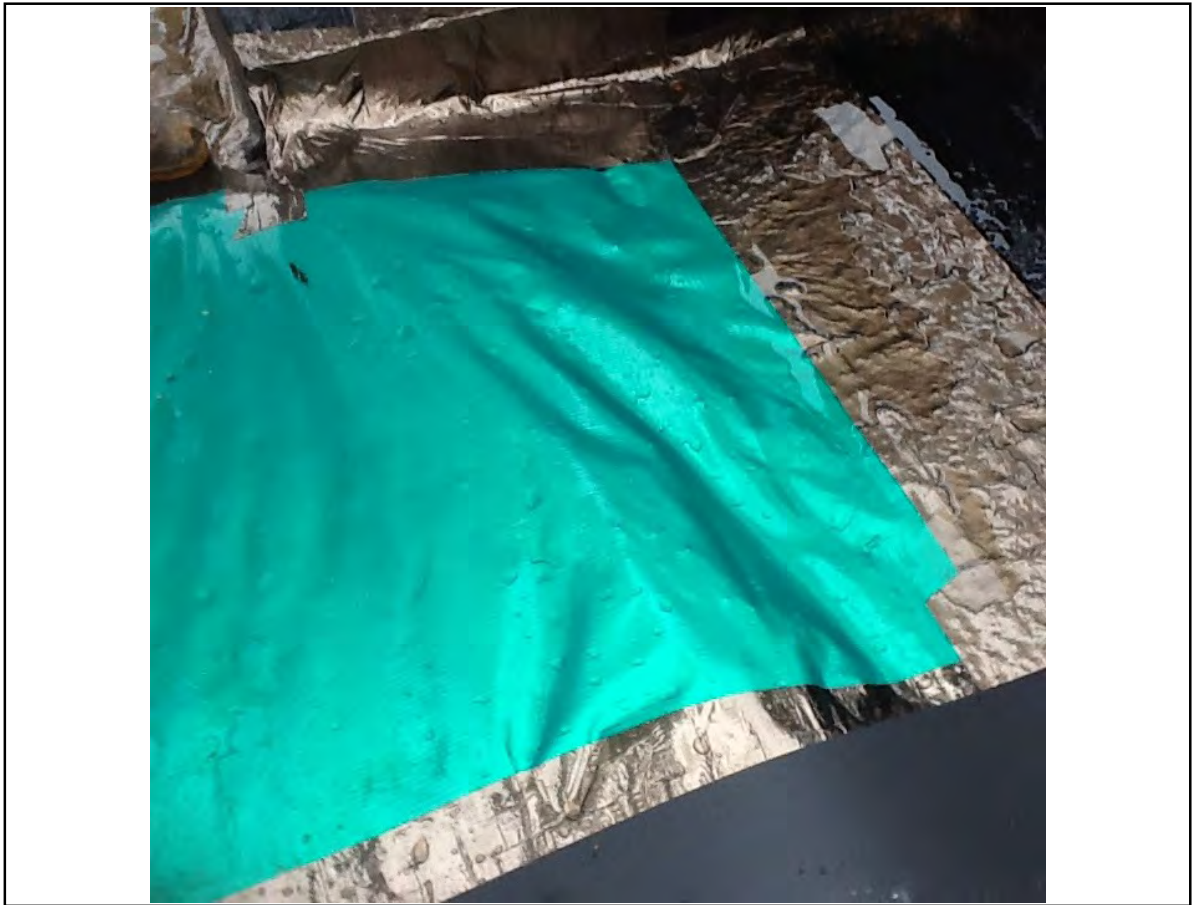
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GEOSHIELD Verification Report



VERIFICATION ITEM ONE



Overview detailing tape to seal membrane to LG and edge beam join

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VERIFICATION ITEM TWO

LOCATION/GRID LINE: A-4 column

NOTES: Two views showing detailing tape applied to the join

Between Columns , edge beam and main 8000 membrane



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VERIFICATION ITEM TWO



Overview also showing Hydroprufe LG applied to column bases,

Detail tape overlaid making seal between membrane

and columns .

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GEOSHIELD Verification Report



VERIFICATION ITEM THREE

LOCATION/GRID LINE: Pipe penetration near grid ref A4

NOTES: Detailing tape around pipe penetration applied to

Specification



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VERIFICATION ITEM THREE



Overview pipe penetration detail

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GEOSHIELD Verification Report



REMEDIATION LOG

Date	Nr	Remediation Description	Y/N
20th Mar	001	No remediation items	✓
20th Mar	001	Protection board still to fix	✓
23rd Mar	002	300mm detailing tape overlaid to edge beams and membrane	✓
23rd Mar	002	Column and edge beam detailing sealed to specification	✓
23rd Mar	002	Pipe penetrations detailed to specification	✓

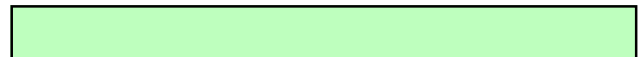
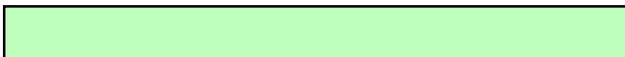
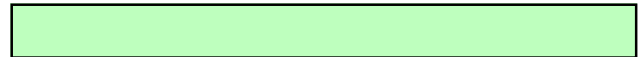
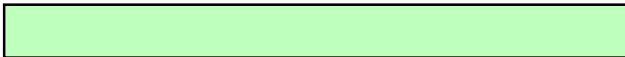
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ADDITIONAL PHOTOS



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GEOSHIELD Verification Report



GAS MEMBRANE TESTING

VISUAL:

YES



NO



SMOKE TEST:

YES



NO



COMPRESSED AIR:

YES



NO



DILECTIC

YES



NO



DESTRUCTIVE:

YES



NO



YES



NO



OTHER:

GRID LINE:

Area: A/H - 1/3+



GRID LINE:

Area A/H 1/4



GRID LINE:



GRID LINE:



GRID LINE:



GRID LINE:



GRID LINE:



GRID LINE:



GRID LINE:



GRID LINE:



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GEOSHIELD Verification Report



VERIFICATION SUMMARY

Second visit , overview of previous visit area and the next grid line section along.

Protection applied ready for pour

Areas lifted to enable closer examination

GEOSHIELD SIGNITURE:

DATE: 23rd March 2017

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GEOSHIELD Verification Report



PROJECT REFERENCE: GEO1001700/KC/P

PROJECT: Porcelenosa: Kenwood Construction

PROJECT ADDRESS: 21 Rose Kiln Lane

Reading

RG1 6SP

MEMBRANE SPECIFICATION: Gas membrane to specification BS8485 2015

Installed to CIRIA 735

Hydroprufe 9000

Hydroprufe 8000

Dual Tape

Girth Tape

Foil backed detailing tape

Hydroprufe LG Liquid Gas Membrane

Verification Plan will not be legally valid until payment is made.



GEOSHIELD Verification Report



MEMBRANE SPECIFICATION:

DESIGN DETAILS:

31363/5002/003 C1 Foundations and ground floor plan

31363/5002/020 C2 Substructure Sections

365001 Rev A

365002 Rev A

365003 Rev A

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GEOSHIELD Verification Report



SURVEYOR:

Chris Kynman

VERIFICATION COMPANY:

GeoShield Limited

Hoyle Mill Road

Kinsley

West Yorkshire

WF9 5JB

CONTACT NUMBER:

07387 373 167

EMAIL ADDRESS:

Chris.kynman@geoshield.co.uk

ORDER NUMBER:

PER VISIT: YES:

☐

NO:

☐

PROJECT: YES:



NO:

☐

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GEOSHIELD Verification Report



CLIENT DETAILS

CLIENT CONTACT: Stephen Gatehouse

CONTACTS ROLE: Project Manager

MOBILE PHONE: 07887983302 / 01553 776543

EMAIL ADDRESS: Stephengatehouse@chalcroft.co.uk

CLIENT CONTACT:

CONTACTS ROLE:

MOBILE PHONE:

EMAIL ADDRESS

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GEOSHIELD Verification Report



APPLICATION TEAM LEADERS

APPLICATOR NAME: Tony Groves: Foreman

COMPANY: Nick Kenward Construction Limited

APPLICATOR TEL: 07730 575862

APPLICATOR EMAIL:

APPLICATOR NAME: Frank Holman

COMPANY: Nick Kenward Construction Limited

APPLICATOR TEL: 07917 688078

APPLICATOR EMAIL:

NOTES:

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GEOSHIELD Verification Report



AREA SURVEYED: A/B - 4/7

SITE CONDITIONS:

WEATHER: Cloudy

TEMPERATURE: 13C

MEMBRANE TEMPERATURE: N/A

RELATIVE HUMIDITY: 63%

TIME: 10.30am - 11.30am REPORT NUMBER: 003

DATE: 3rd April 2017

ACCOMPANIED Stephen Gatehouse

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