



5 December 2022

Jonathan Driver (C/O David Eaves)
Environmental Control Officer
Havant Borough Council
Public Service Plaza
Civic Centre Road
Havant
PO9 2AX

Dear Jonathan Driver,

**DISCHARGE OF CONDITIONS 12 AND 13 IN RELATION TO PLANNING
REFERENCE APP/21/1244 - 32 NEW LANE, HAVANT PO9 2NG**

I am writing on behalf of TSL Ltd who are responsible for the construction works that have been carried out at 32 New Lane, Havant. My name is Charlie O'Sullivan and I am the Project Manager responsible for overseeing the site enabling works, demolition, through to the main construction works on this project.

During the construction project we have followed the Remediation Strategy approved by the original planning application and subsequent amendments. The Materials Management Plan was also adhered to during the construction phase.

Following on from the Verification Report – Materials Management and Remedial Earthworks Report Ref: UK21.5634 issue 1 (09/05/2022) produced by EPS, this letter and its associated appendix seeks to verify the Construction Phase works now the project draws to completion. This is in response to comments made by Jonathan Driver, the Environmental Control Officer (EHO) on 24th November 2022.

We have provided details regarding the earthworks undertaken / used in landscaping with the soils imported into the site have been verified, the details in relation to the gas membranes (sub-floor soil gas protection) and barrier pipes have been installed and verified by an independent contractor. The list of documents which provides these details are:

- Ground Gas Protection Membrane Validation Report produced by Phoenix Geotechnical Ltd (report dated 19/10/2022) following site inspections they carried out in September 2022.
- Verification / Integrity Plan produced by Phoenix Geotechnical Ltd (signed on 14th September 2022)
- Ground Gas Protection was installed by Dance-Reeves Ltd (a contractor employed by TSL Projects Ltd)
- Topsoil Analysis Report: Tangmere Composting Site, Chichester – Batch L9 letter produced by Tim O'Hare Associates dated 14th October 2022 (topsoil used in



- landscaping and earthworks which was brought into site) and receipts
- Receipts of barrier pipes purchased from Radius Systems and Site photographs for M&S Excavation

Should you have any queries or further areas of clarification, please do not hesitate to contact me.

My telephone number is 0781 565 1785 and my email address is:

Charlie.OSullivan@tslprojects.com

Yours faithfully,

Charlie O'Sullivan

Charlie O'Sullivan.

THE
DIFFERENCE
IS CLEAR



Job references: E02268

Ontrack Ref: 1627371

Permit Number(s):

Address: 32 New Lane, Havant, Portsmouth PO9 2NL

Images

Images for: M&S Supervisor(2)

1. M&S Supervisor(2)



Created: 1 Jul 2022, 10:52:32
Created by: Daniel Brennan
Tags: Progress,

2. M&S Supervisor(2)



Created: 1 Jul 2022, 11:50:30
Created by: Daniel Brennan
Tags: Progress,

Images for: M&S Excavation(3)

1. M&S Excavation(3)



Created: 4 Jul 2022, 10:39:20
Created by: Michael Elmer
Tags: Progress,

2. M&S Excavation(3)



Created: 4 Jul 2022, 17:14:07
Created by: Michael Elmer
Tags: Progress,

3. M&S Excavation(3)



Created: 4 Jul 2022, 17:14:36
Created by: Michael Elmer
Tags: Progress,

Images for: M&S Supervisor(4)

1. M&S Supervisor(4)



Created: 4 Jul 2022, 14:05:46
Created by: Daniel Brennan
Tags: Progress,

Images for: M&S Excavation(8)

1. M&S Excavation(8)



Created: 6 Jul 2022, 15:55:28
Created by: Michael Elmer
Tags: Progress,

Images for: M&S Excavation(9)

1. M&S Excavation(9)



Created: 7 Jul 2022, 08:05:18
Created by: Michael Elmer
Tags: Start,

Images for: M&S Excavation(10)

1. M&S Excavation(10)



Created: 8 Jul 2022, 11:13:04
Created by: Michael Elmer
Tags: Progress,

2. M&S Excavation(10)



Created: 8 Jul 2022, 11:13:33
Created by: Michael Elmer
Tags: Progress,

Images for: M&S Excavation(11)

1. M&S Excavation(11)



Created: 12 Jul 2022, 15:50:55
Created by: Mark Fossey
Tags: Progress,

Images for: M&S Supervisor(12)

1. M&S Supervisor(12)



Created: 12 Jul 2022, 17:37:10
Created by: Thomas Harkin
Tags: Progress,

2. M&S Supervisor(12)



Created: 12 Jul 2022, 17:37:25
Created by: Thomas Harkin
Tags: Progress,

Images for: M&S Supervisor(17)

1. M&S Supervisor(17)



Created: 15 Jul 2022, 13:00:38
Created by: Daniel Brennan
Tags: Progress,

2. M&S Supervisor(17)



Created: 15 Jul 2022, 15:18:48
Created by: Daniel Brennan
Tags: Progress,

3. M&S Supervisor(17)



Created: 15 Jul 2022, 15:18:58
Created by: Daniel Brennan
Tags: Progress,

Images for: M&S Excavation(23)

1. M&S Excavation(23)



Created: 22 Jul 2022, 09:53:14

Created by: Mark Fossey

Tags: Progress,

Comments:

Mark Fossey,22 Jul 2022, 09:53:37:

Tape up butt joints

2. M&S Excavation(23)



Created: 22 Jul 2022, 12:37:39

Created by: Mark Fossey

Tags: Progress,



RADIUS SYSTEMS LTD

BERRISTOW LANE
SOUTH NORMANTON, ALFRETON
Tel: +44 (0)1773 811112
Fax: +44 (0)1773 582350

Reg: 1585669
Tax: GB 168 9373 12
EORI: GB168937312000
EORI: XI168937312000

DESPATCH NOTE 236216/0001

Load Reference: 022205

Despatch Date: 04/07/22

Despatch To : M&S WATER SERVICE (UTILITIES) LTD

NEW LANE
Havant
Hampshire
PO9 2NL

Del Contact : Daniel Brennon
Del Number : 07534 165108

Invoice To : PLASTECH (SOUTHERN) LIMITED
102-120A NORTH LANE

HAMPSHIRE

GU12 4QN

Telephone : 01252 336803

Customer ID : PLA004

Customer Ref	Sales Order	Order date	Salesperson	Customer Contact	Telephone
ALD12449	236216	29/06/22	Ryan Wright	Lisa Morrell	

Delivery discrepancies must be reported to Radius Systems Limited within 48 hours. If a discrepancy is found at point of offloading, Radius Systems' driver must countersign amended despatch note. No claims for loss or damage will be considered unless specified in writing on day of delivery to the above address. I accept that the terms and conditions of sale of Radius Systems Ltd shall be the basis of trading between us and we will not seek to rely on our terms and conditions in respect of this contract.

Stock code	Description	Despatch Qty	UOM	(L/C)
XQ2571	PURITON II PIPE LB 63x50M PE80 SDR11 Lot Number: H8230522	100.000	M	2

Del Comment :

4

Pipe Site Access Requirements

Site Access Times : 0001 - 1630
Site Hazards/H&S : N
Road Closure Required? : N

Trailer No. : RAD 315

Tail Lift? :
Rigid Access Only? : N
Crane? : N
Space for Outrigger Legs? : Y

THE MATERIALS LISTED ABOVE
HAVE BEEN RECEIVED IN GOOD
CONDITION.

COLLECTING DRIVER'S SIGNATURE

PRINT NAME

DATE

THE MATERIALS LISTED ABOVE
HAVE BEEN RECEIVED IN GOOD
CONDITION.

CUSTOMER'S SIGNATURE

PRINT NAME

COMPANY

DATE

TO CUSTOMERS AND HAULIERS

All goods carried on behalf of Radius Systems Limited shall be subject to Road Haulage Association Limited Conditions of Carriage 1998, also to the conditions printed on this delivery note. The haulier must provide effective means to secure the load to the vehicle. When delivery requires a vehicle-mounted crane, the vehicle/crane driver is responsible for all slinging activities and managing the safe offloading operation. Where the driver believes assistance is required to ensure safe offloading e.g. control of traffic around unloading site, the customer is expected to provide that assistance, holding guide rope as a minimum. The vehicle/crane driver is only permitted to offload when he believes it is safe to do so. Where offloading is not by vehicle-mounted crane, the customer shall manage the safe offloading operation and provide suitable offloading equipment. In these situations the vehicle driver will comply with all reasonable/safe requests to assist. Equally the driver should not comply if endangering personnel or property. If in any doubt, the primary haulier's office must be contacted.

1 Copy Return to Office; 1 Copy to be Retained by Customer; 1 Copy POD

Printed Date/Time: 04/07/2022 - 7:11.04



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Systems

RADIUS SYSTEMS LTD

BERRISTOW LANE
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EORI: GB168937312000
EORI: XI168937312000

DESPATCH NOTE
236216/0003

Load Reference: 022208
Despatch Date: 06/07/22

Despatch To : MS WATER SERVICES (UTILITIES) LTD NEW LANE Havant PO9 2NL	Del Contact : Del Number : 07534 165108 Master Customer Account : PLA004 Invoice Customer Name : PLASTECH (SOUTHERN) LIMITED
---	---

Customer Ref	Sales Order	Order Date	Salesperson	Customer Contact	Telephone
ALD12449	236216	29/06/2022		Lisa Morrell	01773 811112

Delivery discrepancies must be reported to Radius Systems Limited within 48 hours. If a discrepancy is found at point of offloading, Radius Systems' driver must countersign amended despatch note. No claims for loss or damage will be considered unless specified in writing on day of delivery to the above address. I accept that the terms and conditions of sale of Radius Systems Ltd shall be the basis of trading between us and we will not seek to rely on our terms and conditions in respect of this contract.

Stock Code	Description	Despatch Qty	UOM	(L/C)
XQ2568	PURITON II PIPE LB 63x6M	18	M	3
VC0289	PIPE DB 125x12M 16BAR PE100	24	M	2
XQ0145	PURITON II PIPE DB 90x12M	456	M	38

Del Comment:

No. of Cages : 0	Trailer No. : RAD 56
Pipe Site Access Requirement :	Tail Lift? :
Site Access Time :	Rigid Access Only? : N
Site Hazards/H&S :	Crane? : N
Road Closure Required? : N	Space for Outrigger Legs : N

THE MATERIALS LISTED ABOVE
HAVE BEEN RECEIVED IN GOOD
CONDITION.

COLLECTING DRIVER SIGNATURE

PRINT NAME
Trevor Hickerman

DATE: 06/07/22

THE MATERIALS LISTED ABOVE
HAVE BEEN RECEIVED IN GOOD
CONDITION.

CUSTOMER SIGNATURE

PRINT NAME
MELMER

COMPANY:
MS WATER SERVICES (UTILITIES)
LTD

DATE: 06/07/22

TO CUSTOMERS AND HAULIERS

All goods carried on behalf of Radius Plastics Limited shall be subject to Road Haulage Association Limited Conditions of Carriage 1998, also to the conditions printed on this delivery note. The haulier must provide effective means to secure the load to the vehicle. When delivery requires a vehicle-mounted crane, the vehicle/crane driver is responsible for all slinging activities and managing the safe offloading operation. Where the driver believes assistance is required to ensure safe offloading e.g. control of traffic around unloading site, the customer is expected to provide that assistance, holding guide rope as a minimum. The vehicle/crane driver is only permitted to offload when he believes it is safe to do so. Where offloading is not by vehicle-mounted crane, the customer shall manage the safe offloading operation and provide suitable offloading equipment. In these situations the vehicle driver will comply with all reasonable/safe requests to assist. Equally the driver should not comply if endangering personnel or property. If in any doubt, the primary haulier's office must be contacted.



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Systems

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EORI: GB168937312000
EORI: XI168937312000

DESPATCH NOTE

Load Reference: 022316
Despatch Date: 12/07/22

Despatch To : MS WATER SERVICES (UTILITIES) LTD	Del Contact : Del Number : 07534165108 Master Customer Account : PLA004 Invoice Customer Name : PLASTECH (SOUTHERN) LIMITED
NEW LANE Havant PO9 2NL	

Customer Ref	Sales Order	Order Date	Salesperson	Customer Contact	Telephone
	236778-2	06/07/2022		Lisa Morrell	01773 811112

Delivery discrepancies must be reported to Radius Systems Limited within 48 hours. If a discrepancy is found at point of offloading, Radius Systems' driver must countersign amended despatch note. No claims for loss or damage will be considered unless specified in writing on day of delivery to the above address. I accept that the terms and conditions of sale of Radius Systems Ltd shall be the basis of trading between us and we will not seek to rely on our terms and conditions in respect of this contract.

Stock Code	Description	Despatch Qty	UOM	(L/C)
XQ2535	PURITON II PIPE LB 32x50M PE80 SDR11	200	M	4

Del Comment:

No. of Cages : 0	Trailer No. : CSRAD06
Pipe Site Access Requirement :	Tail Lift? :
Site Access Time :	Rigid Access Only? : N
Site Hazards/H&S :	Crane? : N
Road Closure Required? : N	Space for Outrigger Legs : N

THE MATERIALS LISTED ABOVE
HAVE BEEN RECEIVED IN
GOOD CONDITION.

COLLECTING DRIVER SIGNATURE

PRINT NAME
Denis Stewart

DATE: 12/07/22

THE MATERIALS LISTED
ABOVE HAVE BEEN RECEIVED
IN GOOD CONDITION.

CUSTOMER SIGNATURE

PRINT NAME
STUART

COMPANY:
MS WATER SERVICES
(UTILITIES) LTD

DATE: 12/07/22

TO CUSTOMERS AND HAULIERS

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EORI: GB168937312000
EORI: XI168937312000

DESPATCH NOTE

236778/0001

Load Reference:

Despatch Date:

Despatch To : **M&S WATER SERVICES (UTILITIES) LTD**

**NEW LANE
Havant
Hampshire
PO9 2NL**

Del Contact :

Del Number :

Invoice To : **PLASTECH (SOUTHERN) LIMITED**
102-120A NORTH LANE

HAMPSHIRE

GU12 4QN

Telephone : 01252 336803

Customer ID : **PLA004**

Customer Ref	Sales Order	Order date	Salesperson	Customer Contact	Telephone
ALD12530	236778	06/07/22	Ryan Wright	Lisa Morrell	

Delivery discrepancies must be reported to Radius Systems Limited within 48 hours. If a discrepancy is found at point of offloading, Radius Systems' driver must countersign amended despatch note. No claims for loss or damage will be considered unless specified in writing on day of delivery to the above address. I accept that the terms and conditions of sale of Radius Systems Ltd shall be the basis of trading between us and we will not seek to rely on our terms and conditions in respect of this contract.

Stock code	Description	Despatch Qty	UOM	(L/C)
XR0291	PURITON II FLANGE 90x80NP16 16BAR PE100 SDR11 PUP RILSAN Lot Number: BF1411 4.000	4.000	EA	
WA0215	COUPLER BK E/F 180 16BAR WATER /10BAR GAS PE100 40V 4.0PIN Lot Number: P21 15.000	15.000	EA	
WA0210	COUPLER BK E/F 90 16BAR WATER /10BAR GAS PE100 40V 4.0PIN Lot Number: P20 10.000	10.000	EA	
XR5251	PURITON II COUPLER 63 USE ON PURITON II PIPE XQ25** Lot Number: P10 6.000	6.000	EA	
WA3352	ELBOW BK E/F 180x90DEGREE 16 BAR WATER/10BAR GAS PE100 40V Lot Number: P16 17.000	17.000	EA	
WA3347	ELBOW BK E/F 90x90DEGREE 16BAR WATER/10BAR GAS PE100 40V Lot Number: P19 10.000	10.000	EA	
WA3323	ELBOW BK E/F 180x45DEGREE 16 BAR WATER/10BAR GAS PE100 40V Lot Number: P22 10.000	10.000	EA	
WA2210	EQUAL TEE BK E/F 90 16BAR WATER/10BAR GAS PE100 40V Lot Number: P20 1.000	1.000	EA	
WA2215	EQUAL TEE BK E/F 180 16BAR WATER/10BAR GAS PE100 40V Lot Number: P20 6.000	6.000	EA	
WA4297	REDUCER BK E/F 180x125 16BAR WATER/10BAR GAS PE100 40V Lot Number: P13 6.000	6.000	EA	
WC5317	HYDRANT DUCKFOOT DB 125x80NP16 16BAR PE100 E/F KIT SC Lot Number: P19 6.000	6.000	EA	
XR5259	PURITON II ADAPTOR M 63x2 INCH USE ON PURITON II PIPE XQ25** Lot Number: P07 6.000	6.000	EA	
XR5236	PURITON II ADAPTOR M 32x3/4IN USE ON PURITON II PIPE XQ25** Lot Number: P02 2.000	2.000	EA	
XR5252	PURITON II ELBOW 63x90 DEGREE USE ON PURITON II PIPE XQ25** Lot Number: P01 3.000	3.000	EA	
XR5250	PURITON II ELBOW 32x90 DEGREE USE ON PURITON II PIPE XQ25** Lot Number: N37 4.000	4.000	EA	
XR5242	PURITON II ADAPTOR F 32x1 INCH USE ON PURITON II PIPE XQ25** Lot Number: P10 1.000	1.000	EA	

1 Copy Return to Office; 1 Copy to be Retained by Customer; 1 Copy POD

Printed Date/Time: 17/07/2022 - 15:21:02



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EORI: XI168937312000

DESPATCH NOTE

236778/0001

Load Reference:

Despatch Date:

Despatch To : **M&S WATER SERVICES (UTILITIES) LTD**

**NEW LANE
Havant
Hampshire
PO9 2NL**

Del Contact :

Del Number :

Invoice To : **PLASTECH (SOUTHERN) LIMITED**
102-120A NORTH LANE

HAMPSHIRE

GU12 4QN

Telephone : **01252 336803**

Customer ID : **PLA004**

Del Comment :

0

Pipe Site Access Requirements

Site Access Times : -

Site Hazards/H&S :

Road Closure Required? :

THE MATERIALS LISTED ABOVE
HAVE BEEN RECEIVED IN GOOD
CONDITION.

COLLECTING DRIVER'S SIGNATURE

PRINT NAME

DATE

THE MATERIALS LISTED ABOVE
HAVE BEEN RECEIVED IN GOOD
CONDITION.

CUSTOMER'S SIGNATURE

PRINT NAME

COMPANY

DATE

Trailer No. : 0

Tail Lift? :

Rigid Access Only? :

Crane? :

Space for Outrigger Legs? :

TO CUSTOMERS AND HAULIERS

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Verification/Integrity Plan: TSL Projects, DP01 Building New Lane, Havant PO9 2NG

Validation of Ground Gas Protection System

Phoenix Geotechnical Ltd will entered into a contract with Dance-Reeves Ltd as a third party independent validator for the ground gas membrane works at the above site.

In this document we explain how Phoenix Geotechnical will verify the ground gas membrane works. Phoenix Geotechnical will produce a validation report for the buildings/units once the verification is complete. The validation report will be for works carried out by Dance-Reeves only. Phoenix Geotechnical will refer to the Dance Reeves Method Statement for the specification of the ground gas protection measures and installation procedures for this particular project with 50% verification.

Limitations

Phoenix Geotechnical have not carried out any design work in respect of the ground gas protection measures prescribed for this site and therefore no professional liability is extended in respect of the ground gas protection design. Once Dance Reeves have left site, responsibility for protection of the ground gas membrane passes to the Main Contractor. Phoenix Geotechnical is guided by Dance-Reeves on when required to visit site to carry out inspections.

Guidelines working to:

CIRIA Report C735 (Good Practice on the Testing and Verification of Protection Systems for Buildings Against Hazardous Ground Gases) ASTM Standards D4437 non-destructive testing method

CIRIA C748 (2014) Guidance on the Use of Plastic Membranes as VOC Vapour Barriers
CIRIA C795 Retrofitting hazardous ground gas protection measures in existing or refurbished buildings
BRE 414 and 212, BS8485 2015 and A1:2019 Guidelines.

Chartered Institute of Environmental Health (2008). The local authority guide to ground gas.

Wilson S, Oliver S, Mallett H, Hutching H and Card G (2007) Assessing risks posed by hazardous ground gases to buildings. CIRIA Report C665.

Information provided by Dance Reeves Ltd. Characterization of site CS2.Design by Others

Material proposed by Dance Reeves, **RTEC4 Ground Gas membrane, GRSAM Gas Resistant Self Adhesive**

If any waterproofing element, should be checked by a CSSW qualified Surveyor.

Phoenix Geotechnical has no involvement in the design (by others) and it should be checked by qualified Environmental Engineers. All ground gas protection systems should be agreed with the regulation authorities before the work starts.



Phoenix Geotechnical Ltd

8 De Quincey Fields, Upton Magna,
Shrewsbury, Shropshire SY4 4US

T 01743 709192

E info@phoenixgeotechnical.co.uk



Site conditions for testing:

All areas shall be free of sharp stones, water etc. High winds should be taken into account for the laying of the gas membrane to prevent the risk of damage to the membrane and site operatives for Health and Safety reasons.

Air Temperatures should be taken into account and checked with manufacturers recommendations on specific data sheets.

Installation of Ground Gas Membrane

Carried out by Dance-Reeves Ltd, operatives holding a NVQ level 2 Qualification in gas membranes. A Site specific Method Statement should be produced. **RTEC4 Gas Membrane and GRSAM**, note all joints should be welded where possible on site. **This particular site will be a complete lineout operation.**

RTEC4 Gas membrane system should be laid to the design drawings proposed.

Product Data/Specification Sheets for this particular project should have been provided by Dances Reeves.

Testing Dry Gas/VOC Membranes

Phoenix Geotechnical use Air lancing Non-destructive equipment to offer an aid for testing dry waterproof and ground gas membranes. Damage can be caused by tradesmen working in the area whether the structure is old or new. Waterproof and Ground Gas membranes can also be tested for pinholes and porosity by using a High Voltage Holiday Detector. Phoenix Geotechnical will used Air lancing method ASTM D4437 non-destructive testing where possible.

D4437:- Nondestructive Test Method, Air Lance Test- Inspect all seams for un-bonded areas using an air nozzle directed on the upper seam edge and surface to detect loose edges, ripples are indicating unbonded areas within the seam, or other undesirable seam conditions. Check all bonded seams using a minimum 50psi air supply directed through a 4.8mm nozzle held not more than 51mm from the seam edge and directed at the seam edge.

Air Lancing (non-destructive ASTM D4437) method used to check all areas where possible, welded joints of the **RTEC4 Gas membrane with GRSAM** for all penetrations i.e. Steel Stanchions, pipe entries etc.

A **Mechanical point stress test** will be used where Air lancing is not possible.

Verification

The Validator will identify areas of defects in the manufacturing of the membrane i.e. delamination, holes, tears etc. After installation, check for burning of the membrane during welding procedure which causes holes in the jointed seams also for any large stones, objects under the membrane which could cause damage during concrete flooring procedure.

Review of the installers relevant qualifications/training certs (i.e. CSCS cards or NVQ certificates, as applicable)

Verification of the Ground Gas Membrane Installation.

Perimeter area = Checking placement of RTEC4 ground gas membrane and all welded joints, along with GRSAM to perimeter edge upstand detail. No voids in the GRSAM between the horizontal and vertical detail and the correct heat has been applied.

Infill area = (main floor areas) Checking welded joints and the ground gas membrane condition.

Checking placement of the membrane is correct including overlaps for welded joints. All corners, pipes entries, steel stanchions are correctly sealed using GRSAM.

Repairs = Check GRSAM adhesion, laps and joints 150mm from the damaged area. Correct heat applied to Self-Adhesive. 11 site visits required and photographic evidence. 50% inspection required on CS2 sites



Phoenix Geotechnical Ltd

8 De Quincey Fields, Upton Magna,
Shrewsbury, Shropshire SY4 4US

T 01743 709192

E info@phoenixgeotechnical.co.uk



Should it be necessary for the installers to deviate from the construction drawings during installation, Phoenix Geotechnical should be notified.

Faults and Repairs

After testing and visual inspecting all areas of the membrane, seams/joints etc., if any repairs are required the validator will notify the site foreman of Dance-Reeves for them to carry out repairs.

Procedures on how to carry out repairs to the membrane will be documented in Dance-Reeves method Statement.

All faults should be ringed with a suitable marker so that repairs can be carried out at a later date. The identification of the fault should be far enough away from the defect to allow the repairs to be made without covering the markings, as the substances contained in some markers can affect the adhesion of the repair material.

Testing should be continued across the complete surface and all faults marked. Damaged areas should be re-tested after repairs have been carried out.

All repairs will be documented in the Validation report.

Phoenix Geotechnical will not carry out any repairs.

Should any damage occur to the membrane following inspection, the Main Contractor should ensure the appropriate remedial action, in accordance with industry good practice and the protocols of Dance Reeves is undertaken prior to pouring the floor slab. Phoenix Geotechnical will take no responsibility for the gas membrane.

During Laser screed operations, time must be allowed to check areas where the Laser screed machine has been. Protective Geotextile is required to protect the gas membrane where the feet and wheels of the Laser screed machine have been. All repairs will be carried out and tested where practical possible.



Phoenix Geotechnical Ltd

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Shrewsbury, Shropshire SY4 4US

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E info@phoenixgeotechnical.co.uk



This method of testing D4437:- Nondestructive Test Method has been accepted on a number of sites using the BS8485 2015 and A1:2019 guidelines

Validation Report

Once the Verification has been completed a Validation Report will be put together complete with photographic evidence, a Certificate of Verification, which is site specific. Ground Gas membrane installed by Dance Reeves to the manufacturers recommendations and which materials were used, will be listed.

Signed: 

Date: 14th September 2022

For and on behalf of Phoenix Geotechnical Ltd

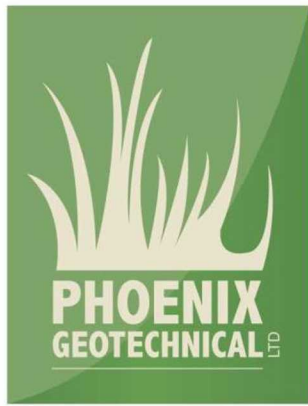


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Specific Experience

Monarflex Geomembranes Ltd: Installation Technician 2 years

Estimator 1 year

Project Manager 3 years

Put together the Standard Design & Procedure Details for gas membrane installations which now forms part of the NVQ level 2 Gas membrane installations qualification.

ReeveTec Membranes Ltd: Director 18 years

ReeveTec Membranes were part of a number of companies that helped the Construction Skills CITB put together the NVQ level 2 Gas membrane installations qualification.

Trained a number of Installation Technicians who have now either started their own or work for other companies within the gas membrane industry, including Independent Validations companies.

Phoenix Geotechnical Ltd: Director 9 years

Verification of Ground Gas Protection Systems. Neil Salvidge Training Development Assessment Ltd
Working towards, NVQ Level 4 - Diploma Verifications of Ground Gas Protection Systems.

Other On-site Verifiers Experience:

Monarflex Geomembranes Ltd: 10 years Senior Installation Technician

PA Geotechnical Ltd: 2years Senior Installation Technician

ReeveTec Membranes Ltd: 9 years Senior Estimator

ReeveTec Membranes Ltd: 5 years Project Manager

Phoenix Geotechnical Ltd: On-Site VGGPS 5 years

Qualifications: Verification of Ground Gas Protection Systems, CSCS, SMSTS, SSSTS, NVQ Level 3 Site Supervisor. PCA ground gas protection system verifier.



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Ground Gas Protection Membrane Validation Report

Dance-Reeves Ltd
Unit A5a
Barton Industrial Estate
Faldo Road
Barton
Beds
MK45 4RP

Project/Client: TSL Projects
Site: New Warehouse, New Lane Havant

Report Compiled by: Sean Reid
Date: 19/10/22



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1. Introduction

1.1 Purpose

Dance-Reeves Ltd installed a ground gas protection membrane at New warehouse, New Lane, Havant for TSL Projects. Phoenix Geotechnical carried out the validation/ integrity testing of the ground gas membrane installation on the aforementioned site. This ground gas membrane installation was a complete lineout operation and testing was carried out where practically possible. Phoenix Geotechnical referred to the Dance Reeves Method Statement for the specification of the ground gas protection measures and installation procedures for this particular project.

1.2 Limitations

Phoenix Geotechnical, have prepared this report in accordance with the contract between Dance-Reeves and TSL Projects under the terms of its appointment for the ground gas membrane installation. This report is not a Guarantee or Warranty.

This report is limited to the verification that the ground gas membrane measures are correctly installed by Dance-Reeves only. Dance-Reeves or Phoenix Geotechnical have not carried out any design work in respect of the gas protection measures prescribed for this site and therefore no professional liability is extended in respect of the gas protection design. Phoenix Geotechnical is guided by Dance-Reeves on when required to visit site to carry out inspections. Once Dance Reeves have left site, responsibility for protection of the membrane passes to the Main Contractor.

Should any damage occur to the membrane following inspection, the Main Contractor should ensure the appropriate remedial action, in accordance with industry good practice and the protocols of Dance Reeves is undertaken prior to pouring the floor slab.

This report has been prepared in accordance with the best available practice and the relevant guidance documents listed below:

Chartered Institute of Environmental Health (2008). The local authority guide to ground gas.

Wilson S, Oliver S, Mallett H, Hutching H and Card G (2007) Assessing risks posed by hazardous ground gases to buildings. CIRIA Report C665.

CIRIA Report C735 (Good Practice on the Testing and Verification of Protection Systems for Buildings Against Hazardous Ground Gases) and ASTM Standards D4437

CIRIA C748 (2014) Guidance on the Use of Plastic Membranes as VOC Vapour Barriers

CIRIA C795 Retrofitting hazardous ground gas protection measures in existing or refurbished buildings

BRE 414 and 212

BS8485 2015 and A1:2019 Guidelines.

All Phoenix Geotechnical representatives (validators) have a combined level of 40 years of experience within the ground gas/geomembrane industry and are fully converse within the guidelines list above. This report and its contents should not be used for any purpose other than that for which it was prepared and provided.

Should the Client be required to pass copies of the report to other parties for information, the whole report should so be copied, but no professional liability or warranty shall be extended to other parties by Phoenix Geotechnical in this connection without the explicit written agreement thereto.

PCA membership for Ground Gas Verifiers



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2. Validation Report

2.1 Material Installed

2.1.1 Gas Barrier

RTEC4 ground gas membrane system. RTEC4 ground gas membrane product is colored BLACK for ease of identification on site. It is positioned beneath the ground floor concrete slab. Gas resistant self- adhesive membrane (GRSAM) WHITE was also used to seal the perimeter, corners, pipe entries etc. Dance Reeves installers qualified to NVQ level 2 in gas membranes.

2.1.2 Jointing

Hot Air Welding. The minimum permissible weld is 40mm (Leister Nozzles width). Also used were Twinny Leister Welders. Care was taken to ensure that the membrane was clean and dry at the time of jointing

2.1.3 Tears/Holes & Punctures, Perforations or punctures in the sheet were repaired using patches of Gas Resistant Self Adhesive Membrane (GRSAM) with a minimum 75mm to cover tear, puncture or holes.

3.2 Inspection Method

An Inspection was carried out on the following dates: 9th September, 12th September 21st September, 23rd September & 28th September 22

- 1) The Inspector /Supervisor conducted an initial walkover of areas to be validated to familiarise himself with the area to be inspected.
- 2) On completion of the initial walkover the Inspector visually inspected and probe tested (mechanical stress test where practical) internal details to ensure correct installation integrity. Sample photographs of details for the validation file were then taken. This process was then repeated on all internal and external details.
- 3) The Inspector /Supervisor then carried out inspection and an Air Lancing test (where practical) to all penetrations to ensure integrity of the seal. Sample photographs of penetrations for the validation file were then taken.
- 4) The Inspector/Supervisor then visually inspected and tested the floor membrane joints. Sample photographs of membrane joints for the validation file were then taken. (Mechanical Stress test)
- 5) The Inspector/Supervisor then carried out a thorough inspection of the ground gas membrane, where possible, using Air Lance testing equipment (where practical) to check the barrier for any damage and check any repairs that had already been carried out. The Inspector/Supervisor then informed the Installation Supervisor on the remedial work required. The Inspector remained on site whilst remedial measures were undertaken. Probe tested (Mechanical Stress) for and photos for the validation report.



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On completion of the inspection and subsequent re-inspection of remedial work completed, an inspection by the Inspector and the Supervisor from Dance-Reeves was carried out and signed off prior to handover to following Trades

3.3 Gas Protection Validation Record

(Please refer to the attached Guide Notes).

Job Number:	2022/283	Design Source/Ref:	N/A	Specification Source/Ref:	N/A	Other Documents Attached:	
Site Name/Location:	TSL Projects New Warehouse New Lane Havant	Building Use:	Commercial		Other (Describe):		
Building Ref:	N/A	Building Description:	New ware house				
Compiled By:	Sean Reid	Gas Protection Type:	Membrane Only by DR	Floor Type:	Good Sand Blinded		

Ventilated Sub-Floor (If Present)	Inspection Date/Time:	N/A	Inspected By:		Photographed:	
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Void Former Type	Ã	1.
Height of Void Space	Ã	2.
Gravel Type	Ã	3.
Pipe Size and Spacing	Ã	4.
External wall Airbricks	Ã	5.
Internal Sleeper Walls	Ã	6.
External Vent Trenches/Ducts	Ã	7.



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Gas Barrier	Inspection Dates/Time:	9-9-22 12-9-22 21-9-22 23-9-22 28-9-22	Inspected By:	Sean Reid	Photographed:	yes
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Membrane Type	Ã	8. RTEC4 gas membrane and GRSAM
Extent of Coverage	Ã	9. Foot print of the Building
Underside of Membrane	Ã	10. The membrane was laid to Sand Blinded Floor
Membrane Condition	Ã	11. The membrane was adequately laid to all areas. Any holes found where repaired using Gas Resistant Self Adhesive membrane (GRSAM). Air Lancing testing was used where possible. Note no protective geotextile in the specification.
Laps and Joints	Ã	12. Joints Where visually/pick/probed (Mechanical Stress test) and Air Lanced inspected where practical and all found to be well made with no failures. The welded joints are stronger than a taped joint and therefore as long as they are 40mm they will not pose a problem as the membrane and joint are fully supported after the concrete is cast.
Damp Proof Course	Ã	13. N/A
Service Entries	Ã	14. Joints and Laps (GRSAM) correct heat applied for Adhesion
Cavity Inspection	Ã	15. N/A

Gas Protection Validation Record Guide Notes

1.	Void Former Type	Proprietary type – manufacturer and specification, in accordance with design, installed properly without damage.
2.	Height of Void Space	Height of proprietary former or constructed ventilation space below suspended floor – note any debris on void/obstructions to air flow, note formation soil type (e.g. crushed concrete/brick), any evidence of flooding.
3.	Gravel Type	Gravel type, if used (limestone/granite etc.) and any specification (e.g. 6F2) typical particle dimensions (mm), apparent fines content (low/high), compaction (loose/dense), waterlogging/contamination by clay, organic matter, other debris. Take photographs of stockpile close up shot of stone with tape measure. Alternatively check details on delivery tickets for stone. Take photographs of adjacent plots if at this stage of construction. Check depth of stone conforms to at least 300mm if visible.
4.	Pipe Size and Spacing	Diameter in mm: material type (e.g. PVC): slotted or perforated; positioning and spacing/separation and jointing as on design drawing – if not sketch arrangement – pipes connect with external (telescopic/swan-neck) vents? Take photographs of vents on external walls for each plot. (May be possible to photograph other plots on site which are at stage of installing vents. Will be useful for these plots later on).



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5.	External Wall Airbricks	Check numbers, size and positions as design drawing (if not show, make sketch; check for blockage, e.g. by mortar, or soil/pavings etc).
6.	Internal Sleeper Walls	Check for ventilation holes – e.g. honeycombe brickwork or pip crossings – note size, spacing and location – in accordance with design?
7.	External Vent Trenches/Ducts	Check whether located and constructed in accordance with design drawings; if open-topped gravel, note gravel type and presence of fines/contamination; if pipe or other vents - check positions and construction for functionality and absence of blockages – vents may be built over.
8.	Membrane Type	Note manufacturer and product specification, including batch/roll numbers if present – in accordance with specification? Check stock storage arrangements – protected from dirt and damage?
9.	Extent of Coverage	If membrane is incomplete, further inspection will be required – note areas completed/incomplete – is membrane fully visible or have internal walls been constructed over membrane/screed placed?
10.	Underside of Membrane	Where necessary, for example, when using a granular blanket as a ventilation layer, check the underside of the membrane has adequate protection e.g. minimum 50mm, no fines concrete blinding layer or appropriate geo-textile (see also below).
11.	Slab/Membrane Condition	Record presence of debris/rough surfaces, in particular sharp projections, below or above membrane; record locations of all punctures or repairs, note arrangements to protect membrane surface from traffic/tools and equipment/materials, and temporary weighting down of membrane, e.g. use of boards – record evidence of footprints/tracks on membrane surface, creases or water/wind damage. Take photos of each plot inspected.
12.	Laps & Joints	Check all joints are lapped and sealed in accordance with manufacturer's requirements/specification, particularly where creases/folds are present (usually minimum 150mm laps with double-sided tape, 100mm for welded, between sheets and single tape on top surface; note size of sheets and frequency of edge seals). Take photographs of jointing for each plot.
13.	Damp Proof Course	Record DPC manufacturer and product code – usually integrated with the membrane; measure DPC projection from external wall in mm; check laps and seals between the membrane and DPC – note any potential stress points and tension between the two; check for damage to DPC.
14.	Service Entries and Seals	Note number, position and diameter of service entries – check top hat/self-adhesive seal arrangements in accordance with design/specification (laps and seals between top hat and floor membrane, pipe upstand is usually a minimum of 150mm) check, with jubilee clips to secure top hat seal to pipe – note presence of clips and tightness of connections. Take photographs for all plots inspected. (GRSAM maybe be used)
15.	Cavity Inspection	Check gas membrane or gas resistant DPC is taken across cavity. Check for rips across cavity. Check for jointing detail of gas resistant DPC or membrane across cavity to main membrane. Take photographs for all plots inspected.



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This installation has PASSED inspection.

Any proposed remedial works will be noted. All repairs carried out by Dance Reeves.

Inspector/Supervisor: Sean Reid Date: 19/10/22



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RTEC4 Gas membrane (Black)



RTEC4 Gas membrane (Black) GRSAM (White) perimeter edge

Main floor area

RTEC4 visually inspected

All penetrations Air Lance tested

All welded joints Mechanical Stress tested



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RTEC4 gas membrane (Black)



RTEC4 gas membrane (Black) and GRSAM (White) perimeter edge

RTEC4 visually inspected

All penetrations Air Lance tested

All welded joints Mechanical Stress tested



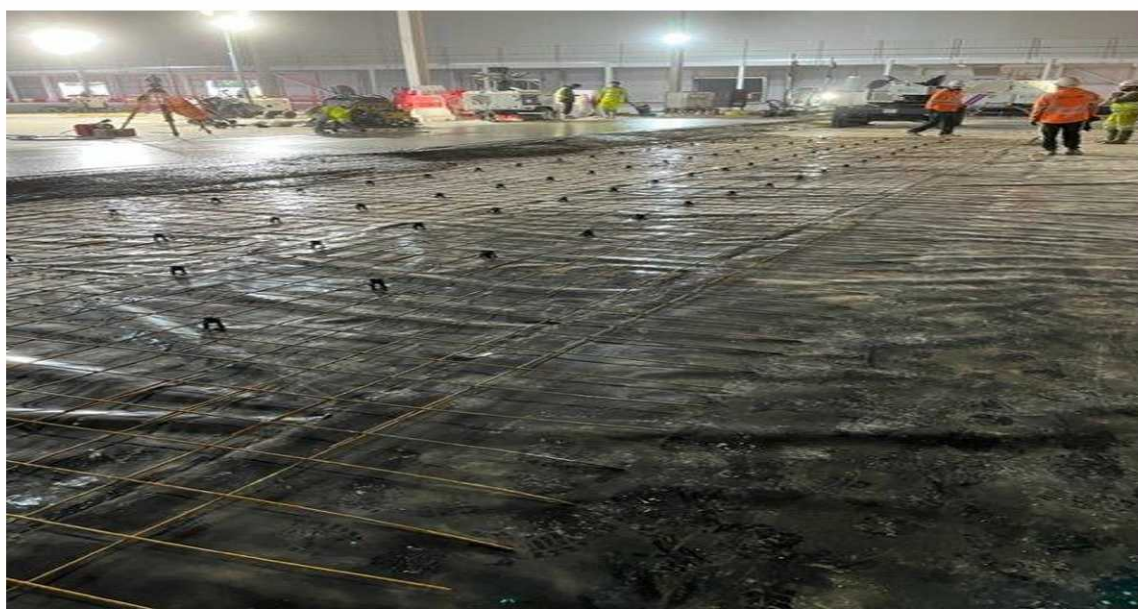
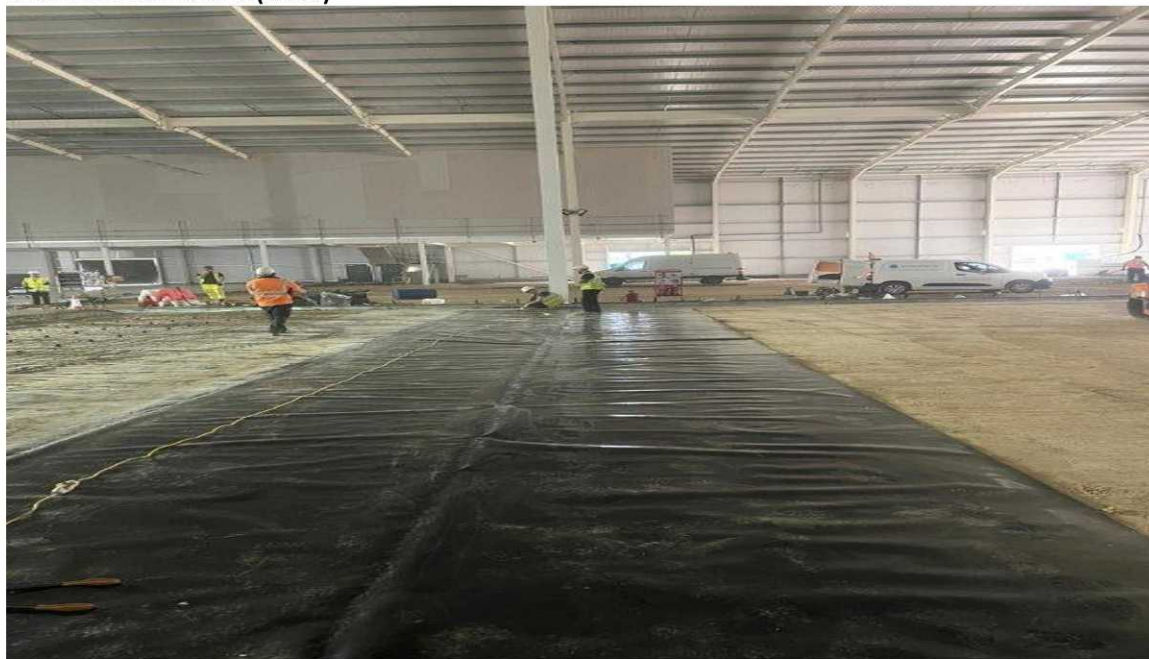
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RTEC4 Gas membrane (Black)



RTEC4 gas membrane (Black)

RTEC4 visually inspected

All penetrations/repairs Air Lance tested GRSAM (White) Pipe entries

All welded joints Mechanical Stress tested



Phoenix Geotechnical Ltd

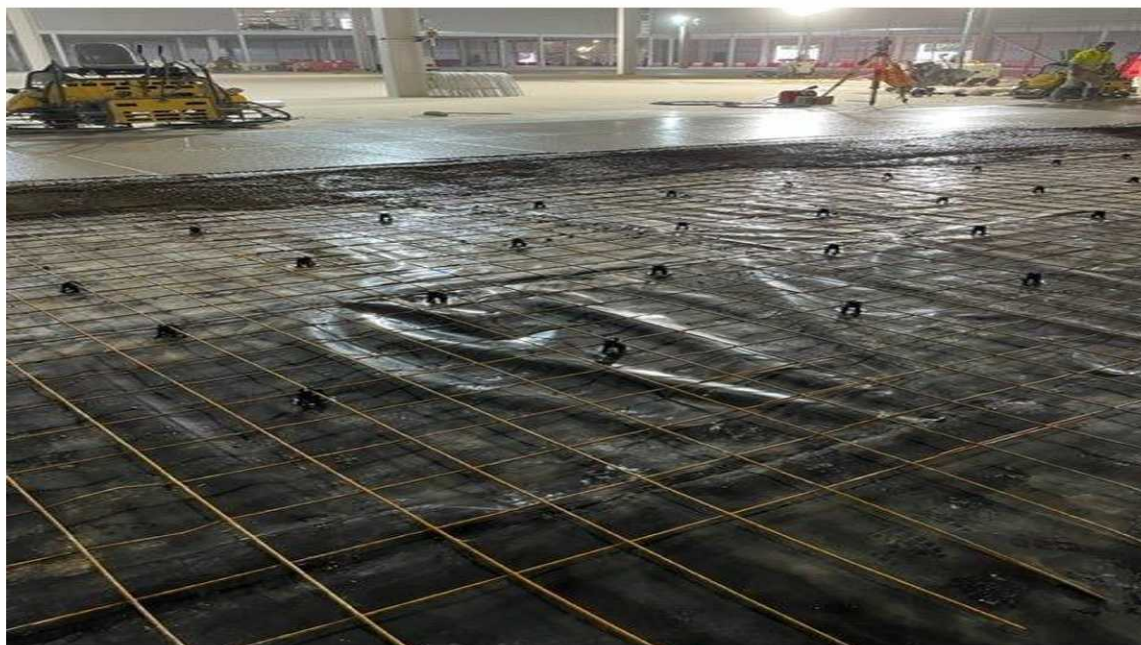
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RTEC4 gas membrane (Black) GRSAM (White)



RTEC4 membrane (Black) GRSAM (White)

RTEC4 visually inspected

Air Lance tested

All welded joints Mechanical Stress tested



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Certification of Validation

CUSTOMER: Dance-Reeves Ltd
Unit A5a Barton Industrial Estate
Faldo road
Barton
Beds
MK45 4RP

APPLICATION: Gas Membrane Installation & Integrity Testing
TSL Projects
New Warehouse
New Lane
Havant

MATERIALS: RTEC4 Ground Gas Membrane System
GRSAM Gas Resistant Self -Adhesive Membrane

PHOENIX GEOTECHNICAL LTD certifies the following:

That the above products conform to the specification details for this project.

Dance-Reeves Ltd also confirms, that the method of installation of the above materials conform to the manufacturers recommended installation procedures and in accordance to BS8485:2015, A1:2019 and BRE 212 and 414 guidelines. CIRIA Report C735 (Good Practice on the Testing and Verification of Protection Systems for Buildings Against Hazardous Ground Gases) ASTM Standards D4437

19th October 2022
Date



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TIM O'HARE ASSOCIATES
SOIL & LANDSCAPE CONSULTANCY

Mr Mike Jupp
The Woodhorn Group
Woodhorn Business Centre
Woodhorn Lane
Oving
Chichester
West Sussex PO20 2BX

14th October 2022
Our Ref: TOHA/22/7694/SS
Your Ref: PO 21633

Dear Sirs

Topsoil Analysis Report: Tangmere Composting Site, Chichester – Batch L9

We have completed the analysis of the soil sample recently submitted, referenced *BS3882 10mm Topsoil Batch L9*, and have pleasure reporting our findings.

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

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

SAMPLE EXAMINATION

The sample was described as a dark olive brown (Munsell Colour 2.5Y 3/3), slightly moist, friable, very slightly calcareous SANDY LOAM with a weakly developed, fine to coarse granular and occasionally sub-angular blocky structure*. The sample was virtually stone-free and contained a moderate proportion of organic fines and occasional woody fragments. No unusual odours, deleterious materials, roots or rhizomes of pernicious weeds were observed.

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

Tim O'Hare Associates LLP
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ANALYTICAL SCHEDULE

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

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

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

RESULTS OF ANALYSIS

Particle Size Analysis and Stone Content

The sample fell into the *sandy loam* texture class. Further detailed particle size analysis found the sample to have a high proportion of particles in the *very fine sand* (0.05-0.15mm) and *fine sand* (0.15-0.25mm) fractions. Topsoils such as this are prone to self-compaction when initially placed in a landscape environment, which can lead to limited drainage and poor aeration, particularly if the soil has no developed structure. To reduce this risk, we recommend placing this soil to a maximum depth of 300mm, which is in line with BS3882:2015, section A.3.

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

pH and Electrical Conductivity Values

The sample was slightly alkaline in reaction (pH 7.4), with a pH value that would be suitable for general landscape purposes.

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

The electrical conductivity value by CaSO₄ extract (3002 µS/cm - BS3882 requirement) slightly exceeded the maximum specified value (3300 µS/cm) given in BS3882:2015 – Table 1. Further testing of electrical conductivity by water extract indicates that excess soluble salts should not present a significant risk to plants.

Organic Matter and Fertility Status

The sample was adequately supplied with organic matter and all major plant nutrients. The sample had an elevated extractable potassium content (1714 mg/l) which exceeded the maximum permissible value given in BS3882:2015 – Table 1, Multipurpose Topsoil (1500 mg/l).

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

Potential Contaminants

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

Of the potential contaminants determined, none exceeded their respective guideline values.

Phytotoxic Contaminants

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

CONCLUSION

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

From the soil examination and subsequent laboratory analysis, the sample was described as a slightly alkaline, non-saline, very slightly calcareous fine sandy loam with a weakly developed structure and very low stone content. The sample was adequately supplied with organic matter and all major plant nutrients with an elevated extractable potassium content. Of the potential contaminants determined, none exceeded their respective guideline values.

To conclude, based on our findings, the topsoil represented by this sample would be considered suitable for general landscape purposes (trees, shrubs and amenity grass), provided species with a wide pH tolerance or those known to prefer alkaline soils are selected and the soil's physical condition is satisfactory.

To minimise the risk of self-compaction and anaerobism, we recommend that this soil is not placed thicker than a maximum depth of **300mm**.

The sample was largely compliant with the requirements of the *British Standard for Topsoil (BS3882:2015 – Specification – Table 1, Multipurpose Topsoil)* with the exception of a slightly elevated extractable potassium content and electrical conductivity value by CaSO_4 extract.

On this occasion, these non-compliances are considered minor when reviewed in the context of all the other results.

Soil Handling Recommendations

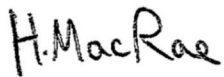
It is important to maintain the physical condition of the soil and avoid structural damage during all phases of soil handling (e.g. stockpiling, resspreading, cultivating, planting, seeding or turfing). As a consequence, soil handling operations should be carried out when soil is reasonably dry and non-plastic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

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

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

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

Yours faithfully



Harriet MacRae
BSc MSc
Graduate Soil Scientist



Rebecca Hollands
BSc MSc MSoilSci
Senior Soil Scientist

For & on behalf of Tim O'Hare Associates LLP



TIM O'HARE ASSOCIATES
SOIL & LANDSCAPE CONSULTANCY

Client:	The Woodhorn Group
Project:	Tangmere Composting Site, Chichester
Job:	Topsoil Analysis (BS3882:2015)
Date:	14/10/2022
Job Ref No:	TOHA/22/7694/SS

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

BS3882 10mm
Topsoil Batch L9

15
10
43
18
5
4
5
75
SL
2
0
0

pH Value (1:2.5 water extract)	units	UKAS
Electrical Conductivity (1:2.5 water extract)	uS/cm	UKAS
Electrical Conductivity (1:2 CaSO ₄ extract)	uS/cm	UKAS
Exchangeable Sodium Percentage	%	UKAS

7.4
1372
3302
6

Organic Matter (LOI)	%	UKAS
Total Nitrogen (Dumas)	%	UKAS
C : N Ratio	ratio	UKAS
Extractable Phosphorus	mg/l	UKAS
Extractable Potassium	mg/l	UKAS
Extractable Magnesium	mg/l	UKAS

6.4
0.40
9
66
1714
228

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

6
< 0.2
12
< 1.8
15
20
< 0.3
11
< 1.0
43
2.8
< 1.0
< 1.0

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

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

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

< 0.001
< 0.001
< 0.001
< 1.0
< 2.0
< 8.0
< 8.0
< 10
< 0.001
< 0.001
< 0.001
< 1.0
< 2.0
< 10
< 10
< 10

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

< 0.001
< 0.001
< 0.001
< 0.001
< 0.001
< 0.001

Asbestos Screen	ND/D	ISO 17025
-----------------	------	-----------

Not-detected

SL = SANDY LOAM

Visual Examination

The sample was described as a dark olive brown (Munsell Colour 2.5Y 3/3), slightly moist, friable, very slightly calcareous SANDY LOAM with a weakly developed, fine to coarse granular and occasionally sub-angular blocky structure. The sample was virtually stone-free and contained a moderate proportion of organic fines and occasional woody fragments. No unusual odours, deleterious materials, roots or rhizomes of pernicious weeds were observed.

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

The contents of this certificate shall not be reproduced without the express written permission of Tim O'Hare Associates LLP.

H. MacRae

Harriet MacRae
BSc MSc
Graduate Soil Scientist

Dispatch Note

Date: 30/11/2022

Page: 1

Bill/Sold To:

Lydon Contracting Ltd
Cuttle Mill Nursery
Northants
Cuttle Mill Lane
Paulersbury, Towester
NN12 7LZ

Job Site/Ship To:

Lydon Contracting Ltd
KPM Contracting
32 New Lane
Havant
PO9 2NG

Quote No.

61818

Job No.

75434

Salesperson

-No Sales Employee-

Manager

Ref

11401BL

DESCRIPTION

QTY / UNIT

UNIT PRICE

EXTENDED PRICE

2/12/2022

Container

8 Wheel Tipper

1.00 /

Product

Topsoil BS3882 (20MM)

18.00 / Tonnes



Dispatch Note

Bill/Sold To:

Lydon Contracting Ltd
Cuttle Mill Nursery
Northants
Cuttle Mill Lane
Paulersbury, Towester
NN12 7LZ

Job Site/Ship To:

Lydon Contracting Ltd
KPM Contracting
32 New Lane
Havant
PO9 2NG

Quote No.	Job No.	Salesperson	Manager	Ref
61696	75281	-No Sales Employee-		11401BL

DESCRIPTION	QTY / UNIT	UNIT PRICE	EXTENDED PRICE
-------------	------------	------------	----------------

18/11/2022

Container

8 Wheel Tipper

1.00 /

Product

Topsoil BS3882 (20MM)

18.00 / Tonnes

99.99

Company Representative (signature)

Company Registration Number: 3629015

Company VAT Number: 816160744

Dispatch Note

Job Site/Ship To:

Lydon Contracting Ltd
KPM Contracting
32 New Lane
Havant
PO9 2NG

Salesperson

-No Sales Employee-

Manager

Ref

11401BL

QTY / UNIT

UNIT PRICE

EXTENDED PRICE

1.00 /

18.00 / Tonnes

CONVEYANCE / TRANSFER NOTE



1393680

7 5BP
co.uk

2

7/1

06

Inert Spoil	17 05 04	Asphalt	17 03 02
Soils & Stone	17 05 04	Builders Waste	17 09 04
Non-Haz Spoil	17 05 04	Hardcore (MRF)	19 12 12
Hazardous Spoil	17 05 03	Soils (MS)	19 12 12
Hardcore	17 01 02	Other - Describe below	
Concrete	17 01 01		

Waste description & EWC / Materials:

Volume	M ³	Load
Gross Weight		Tonnes
Nett Weight		Tonnes
Tare Weight		Tonnes

30.34

17.98

12.36

SIC Code:

Construction 41.10

Civil Engineering 42.99

Demolition 43.11

Waste Collection 38.11

"I confirm that I have fulfilled my duty to apply the waste hierarchy, as required by Regulation 12 of the waste (England and Wales) Regulation 2011"

Customer Signature:

Notes

Customers ordering vehicles off the public road do so entirely at their own responsibility.
 Certified that the above particulars are true and relate to the material or waste being conveyed in the vehicle
 Material or waste is being so conveyed in pursuance of:
 made by the cubic tonne / metre / load
 in tonne / metre / load

in accordance with the
Weights and Measures
Act 1985

CONVEYANCE / TRANSFER NOTE



1393682

1/22	Inert Spoil	17 05 04	Asphalt	17 03 02
	Soils & Stone	17 05 04	Builders Waste	17 09 04
	Non-Haz Spoil	17 05 04	Hardcore (MRF)	19 12 12
	Hazardous Spoil	17 05 03	Soils (MS)	19 12 12
	Hardcore	17 01 02		
	Concrete	17 01 01	Other - Describe below	

Waste description & EWC / Materials:

TOPSOIL

Volume		M ³		Load	In accordance with the Weights and Measures Act 1985
Gross Weight	29.180			Tonnes	
Nett Weight	17.000			Tonnes	
Tare Weight	12.180			Tonnes	

SIC Code:

Construction	41.10	Demolition	43.11
Civil Engineering	42.99	Waste Collection	38.11

"I confirm that I have fulfilled my duty to apply the waste hierarchy, as required by Regulation 12 of the waste (England and Wales) Regulation 2011"

Customer Signature:

[Signature] SAM

Notes

Customers ordering vehicles off the public road do so entirely at their own responsibility.

Certified that the above particulars are true and relate to the material or waste being conveyed in the vehicle described, which material or waste is being so conveyed in pursuance of:

- (a) a sale or agreement for the sale thereof made by the cubic tonne / metre / load
- (b) an agreement for the carriage thereof made by the cubic tonne / metre / load

Dispatch Note

Job Site/Ship To:

Lydon Contracting Ltd
KPM Contracting
32 New Lane
Havant
PO9 2NG

Salesperson

-No Sales Employee-

Manager

Ref

11401BL

QTY / UNIT

UNIT PRICE

EXTENDED PRICE

1.00 /

18.00 / Tonnes

Dispatch Note

Job Site/Ship To:

Lydon Contracting Ltd
KPM Contracting
32 New Lane
Havant
PO9 2NG

Salesperson	Manager	Ref
-No Sales Employee-		11401BL

QTY / UNIT	UNIT PRICE	EXTENDED PRICE
------------	------------	----------------

1.00 /

18.00 / Tonnes

Dispatch Note**Job Site/Ship To:**

Lydon Contracting Ltd
KPM Contracting
32 New Lane
Havant
PO9 2NG

Salesperson

-No Sales Employee-

Manager**Ref**

11401BL

QTY / UNIT**UNIT PRICE****EXTENDED PRICE**

1.00 /

18.00 / Tonnes

Dispatch Note

Bill/Sold To:

Lydon Contracting Ltd
Cuttle Mill Nursery
Northants
Cuttle Mill Lane
Paulersbury, Towester
NN12 7LZ

Job Site/Ship To:

Lydon Contracting Ltd
KPM Contracting
32 New Lane
Havant
PO9 2NG

Quote No.

61819

Job No.

75435

Salesperson

-No Sales Employee-

Manager

Ref

11401BL

DESCRIPTION

QTY / UNIT

UNIT PRICE

EXTENDED PRICE

2/12/2022

Container

8 Wheel Tipper

1.00 /

Product

Topsoil BS3882 (20MM)

18.00 / Tonnes

99.99

Company Representative (signature)

Company Registration Number: 3629015

Company VAT Number: 816160744

WEIGHBRIDGE TICKET

Ticket No. DO738262

THE WOODHORN GROUP

Date: 9/11/2022

Page: 2

Dispatch Note

WOODHORN GROUP Ltd

Tangmere Composting Facility
 City Fields Industrial Estate
 Tangmere
 West Sussex
 PO20 2FP
 EIA Permit No: EFR/D/83703HG
 Company Reg No: 3629015
 VAT No: 816160744
 SIC Code: 38210
 Waste Carrier Licence no: CBDU162145

Time In 09:05
 Date In 11/11/2022
 Time Out 09:25
 Date Out 11/11/2022
 Vehicle GF15XZU
 Carrier TJ Transport Ltd
 License No.
 Client Lydon Contracting Ltd
 Address 32 New Lane, Havant, , PO9
 2NG, SIC Code:
 Permit
 Zone
 Product Topsoil BS3382 (20MM)
 EWC Code
 1st Weight: 12,320.00 Kg NONE
 2nd Weight: 30,300.00 Kg NONE
 Net Weight: 17,980.00 Kg

Job Site/Ship To:

Lydon Contracting Ltd
 KPM Contracting
 32 New Lane
 Havant
 PO9 2NG

No.	Salesperson	Manager	Ref
75201	-No Sales Employee-		11401BL

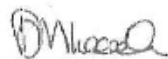
QTY / UNIT	UNIT PRICE	EXTENDED PRICE
------------	------------	----------------

1.00 /

18.00 / Tonnes

Signature waste depositor

Signature waste receiver



Company Representative (signature)

Company Registration Number: 3629015

Company VAT Number: 816160744

WEIGHBRIDGE TICKET

Ticket No. DO738262

THE WOODHORN GROUP

Date: 9/11/2022

Page: 2

Dispatch Note**WOODHORN GROUP Ltd**

Tangmere Composting Facility
City Fields Industrial Estate
Tangmere
West Sussex
PO20 2FP
EA Permit No: EFR/D83703HG
Company Reg No: 3629015
VAT No: 816160744
SIC Code: 38210
Waste Carrier Licence no: CBDU162145

Time In 09:05
Date In 11/11/2022
Time Out 09:25
Date Out 11/11/2022
Vehicle GF15XZU
Carrier TJ Transport Ltd
License No.
Client Lydon Contracting Ltd
Address 32 New Lane, Havant, , PO9
2NG, SIC Code:
Permit
Zone
Product Topsoil BS3382 (20MM)
EWC Code
1st Weight: 12,320.00 Kg NONE
2nd Weight: 30,300.00 Kg NONE
Net Weight: 17,980.00 Kg

Job Site/Ship To:

Lydon Contracting Ltd
KPM Contracting
32 New Lane
Havant
PO9 2NG

No.	Salesperson	Manager	Ref
75201	-No Sales Employee-		11401BL

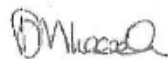
QTY / UNIT	UNIT PRICE	EXTENDED PRICE
------------	------------	----------------

1.00 /

18.00 / Tonnes

Signature waste depositor

Signature waste receiver



Company Representative (signature)

Company Registration Number: 3629015

Company VAT Number: 816160744

Dispatch Note

Bill/Sold To:

Lydon Contracting Ltd
Cuttle Mill Nursery
Northants
Cuttle Mill Lane
Paulersbury, Towester
NN12 7LZ

Job Site/Ship To:

Lydon Contracting Ltd
KPM Contracting
32 New Lane
Havant
PO9 2NG

Quote No.

61628

Job No.

75201

Salesperson

-No Sales Employee-

Manager

Ref

11401BL

DESCRIPTION

QTY / UNIT

UNIT PRICE

EXTENDED PRICE

11/11/2022

Container

8 Wheel Tipper

1.00 /

Product

Topsoil BS3882 (20MM)

18.00 / Tonnes

Company Representative (signature)

Company Registration Number: 3629015

Company VAT Number: 816160744

WEIGHBRIDGE TICKET

Ticket No. DO739821
CONVEYANCE NOTE

WOODHORN GROUP Ltd

Tangmere Composting Facility
City Fields Industrial Estate
Tangmere

West Sussex

PO20 2FP

EA Permit No: EPR/CB3703HG

Company Reg No: 3629015

VAT No: 816160744

SIC Code: 38210

Waste Carrier Licence no: CBDU162145

Time In 09:12

Date In 2/12/2022

Time Out 09:27

Date Out 2/12/2022

Vehicle GN16YDH

Carrier Recycle Southern Limited

License No.

Client Lydon Contracting Ltd

Address 32 New Lane, Havant, , PO9
2NG, SIC Code:

Permit

Zone M8

Product Topsoil BS3882 (20MM)

EWC Code

1st Weight: 13,120.00 Kg NONE

2nd Weight: 31,000.00 Kg NONE

Net Weight: 17,880.00 Kg

By Signing this document I confirm that I have
fulfilled my duty to apply the waste hierarchy as
required by Regulation 12 of the waste (England
and Wales) Regulations 2011

Signature waste depositer

WEIGHBRIDGE TICKET

Ticket No. DO739783
CONVEYANCE NOTE

WOODHORN GROUP Ltd

Tangmere Composting Facility

City Fields Industrial Estate

Tangmere

West Sussex

PO20 2FP

EA Permit No EPR/DB3703HG

Company Reg No.3629015

VAT No 816160744

SIC Code: 38210

Waste Carrier Licence no: GB DU162145

Time In 08:03

Date In 2/12/2022

Time Out 08:20

Date Out 2/12/2022

Vehicle OY16UJP

Carrier Recycle Southern Limited

License No.

Client Lydon Contracting Ltd

Address 32 New Lane, Havant, PO9
2NG, SIC Code:

Permit

Zone M8

Product Topsoil BS3882 (20MM)

EWC Code

1st Weight:	13,640.00	Kg	NONE
-------------	-----------	----	------

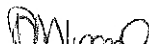
2nd Weight:	31,540.00	Kg	NONE
-------------	-----------	----	------

Net Weight:	17,900.00	Kg	
-------------	-----------	----	--

By Signing this document I confirm that I have fulfilled my duty to apply the waste hierarchy as required by Regulation 12 of the waste (England and Wales) Regulations 2011

Signature waste depositer

Signature waste receiver



WEIGHBRIDGE TICKET

Ticket No. DO738010

WOODHORN GROUP Ltd

Tangmere Composting Facility

City Fields Industrial Estate

Tangmere

West Sussex

PO20 2FP

EA Permit No EFR/DB3703HG

Company Reg No.3629015

VAT No.816160744

SIC Code: 38210

Waste Carrier Licence no: CBDU162145

Time In 08:21

Date In 9/11/2022

Time Out 08:36

Date Out 9/11/2022

Vehicle GF15XZU

Carrier TJ Transport Ltd

License No.

Client Lydon Contracting Ltd

Address 32 New Lane, Havant, , PO9
2NG, SIC Code:

Permit

Zone

Product Topsoil BS3882 (20MM)

EWC Code

1st Weight: 12,360.00 Kg NONE

2nd Weight: 30,340.00 Kg NONE

Net Weight: 17,980.00 Kg

Signature waste depositer

Signature waste receiver



WEIGHBRIDGE TICKET

Ticket No. DO738845
CONVEYANCE NOTE

WOODHORN GROUP Ltd

Tangmere Composting Facility
City Fields Industrial Estate
Tangmere
West Sussex
PO20 2FP
EA Permit No EPR/DB3763HG
Company Reg No.3629015
VAT No.816160744
SIC Code: 38210
Waste Carrier Licence no: CBDU162145

Time in 08:07
Date In 18/11/2022
Time Out 08:23
Date Out 18/11/2022
Vehicle EM16.LFD
Carrier TJ Transport Ltd
License No.
Client Lydon Contracting Ltd
Address 32 New Lane, Havant, , PO9
2NG, SIC Code:

Permit
Zone M4
Product Topsoil BS3882 (20MM)
EWC Code

1st Weight:	13,160.00	Kg	NONE
2nd Weight:	30,980.00	Kg	NONE
Net Weight:	17,820.00	Kg	

By Signing this document I confirm that I have fulfilled my duty to apply the waste hierarchy as required by Regulation 12 of the waste (England and Wales) Regulations 2011

Signature waste depositer