Specialists in Ground Engineering & Energy

Remedial Verification Report for Premier Inn Annex Extension Premier Inn West Didsbury, Christie Fields Business Park, Derwent Ave, Manchester M21 7QS,



Client

EAT SLEEP & DRINK WHITBREAD

Project No: NX601

Specialists in Ground Engineering & Energy

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EXECUTIVE SUMMARY

NX Consulting Limited has been commissioned by Whitbread Plc (The Client) to produce a remedial Completion Report; for the proposed Premier Inn extension, just off Christie Way, Christie Fields Business Pk, Derwent Ave, Manchester M21 7QS.

The existing restaurant has been demolished and redeveloped with a new Premier Inn extension with associated car parking and limited landscaping areas.

The Main Contractor (Medlock Construction) were responsible for provision of a contamination watching brief and importation of landscaping soils.

The above approach involved a 'best sustainable approach' to remediation of potential contamination; involving a minimal approach with respect to the removal and disposal of contaminated materials from site. Minimum material will be taken off site thus conserving landfill space locally and minimising lorry movements onto local roads from the site.

NX Consulting retrospective remediation strategy (Ref: NX601 dated September 2026) for the site, should be read in conjunction with this report.

No significant remediation works were envisaged for the site. The client has confirmed that 36m^3 of topsoil was being imported to site under 'Direct Transfer' from Wain Homes site, Mill Lane, Newton le Willows, WA12 8BS. NX Consulting has carried out validation testing of the topsoil and the results have confirmed that the soils are suitable for a commercial end use.

Medlock Construction confirmed that no additional contamination issues arose during the construction phase of the work.

Simple precautionary measures were recommended during the construction phase i.e. good personal hygiene, provision of suitable welfare facilities and basic personnel protective equipment, to protect site workers coming into contact with soils containing unrecorded slightly elevated concentrations of inorganic and organic contaminants and asbestos.

Unsuitable materials that could not be reused on site were removed from site to a suitably licensed waste management facility. Copies of consignment notes are provided within Appendix A.

Protect-A-line type barrier pipe has been used for a new line of private water supply to the building. This matches the existing hotel specification and the associated risks to human health receptors are deemed to be low.

This report should be issued to the Directorate of Planning of Manchester City Council for approval and to discharge outlying planning conditions relating to ground contamination.

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1.0 INTRODUCTION

1.1 The Commission & Brief

NX Consulting Limited has been commissioned by Whitbread Plc (The Client) to produce a remedial completion report; for the proposed Premier Inn extension, just off Christie Way, Christie Fields Business Pk, Derwent Ave, Manchester M21 7QS.

The existing restaurant has been demolished and redeveloped with a new Premier Inn 4-storey extension with associated car parking and limited landscaping areas.

1.2 Previous Surveys

Previous assessments conducted on the site comprise the following; which should be read in conjunction with this study.

- NX Consulting Limited - Phase1 & Preliminary Phase 2 Geoenvironmental Assessment for Proposed Premier Inn Annex Extension, Premier Inn West Didsbury, Christie Fields Business Park, Derwent Avenue, Manchester, M21 7QS. Ref: NX601. Dated 25th May 2025.
- NX Consulting Limited - Remediation Strategy for Proposed Premier Inn Annex Extension, Premier Inn West Didsbury, Christie Fields Business Park, Derwent Avenue, Manchester, M21 7QS. Ref: NX601. Dated September 2026.

These assessments make reference to earlier studies undertaken, namely:

- NX Consulting Limited - Phase 1 Geoenvironmental Desk Study and Preliminary Phase 2 Assessment at Proposed Premier Inn Extension, Barlow Moor Road, Didsbury, Manchester, M21 7QS. Ref: NX237/R1. Dated April 2015.
- NX Consulting Limited - Remediation Strategy Proposed Premier Inn Extension, Barlow Moor Road, Didsbury, Manchester, M21 7QS. Ref: NX237/R1. Dated March 2016.
- NX Consulting Limited Verification Report for Premier Inn Hotel Extension, Derwent Avenue, West Didsbury, Manchester, M21 7QS. (Ref: NX237/R1) dated July 2016.

The above reports should be read in conjunction with the reports listed above and drawings provided in Appendix A.

Validation of the remedial measures will be required by the Local Planning Authority, the Environment Agency and/or the appointed Building Control officer.

1.3 Limitations

The accuracy of the data supplied by third parties should be considered in the context of any known site conditions for which NX Consulting Limited cannot be held liable.

The comments given in this report and the opinions expressed assume that the ground conditions (geology, hydrogeology, contamination) do not vary beyond the range revealed by this assessment. There may be, however, conditions within the site, which have not been identified from the information reviewed and consequently have not been considered in this report: confirmation of such uncertainties should be the focus of any future intrusive investigations.

The comments made in this report are based on the data available at the time of its completion. Any unusual or conflicting evidence discovered during any future site works must be presented to NX Consulting as soon as possible so that any implications may be considered.

This report is provided for the benefit only of the party to whom it is addressed. NX Consulting does not extend responsibility to any third party for the whole or any part of the contents. NX Consulting owes no duty of care in relation to this report to any third party. The investigation and reportage has been undertaken with all reasonable skill, care and due diligence. NX Consulting disclaims any responsibility to the client or others in respect of any matter(s) outside this agreed scope of the above works.

In addition to the above it should be noted that when investigating or developing land, sub-surface conditions might vary both spatially and over time. Whilst this investigation and subsequent interpretation has been undertaken to reasonably characterise current sub-surface conditions at the site within the scope of works and agreed budget, the absence of certain ground, contamination or groundwater conditions at the individual locations is not a guarantee that these conditions do not exist elsewhere on the site. Additional information, changes in legislation or revised practices may necessitate re-interpretation of part or all of this report.

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2.0 BACKGROUND

2.1 Site Description & Setting

The site is approximately 0.72 hectares and located at the existing Premier Inn Christie Fields Business Park, Derwent Ave, Manchester M21 7QS; approximately 6.4 Kilometres south of Manchester City Centre at NGR: 382959, N392116.

Access is gained from Christie Way to the west of the site.

The site currently comprises a Premier Inn with associated car parking and landscaping, which until recently included a Brewers Fayre Public House. Site topography is generally level. Surface cover comprises a mix of tarmacadam car parking and grass and soil landscaping.

No evidence of fuel tanks, chemical storage areas or gas protection measures such as vents, cowls or passive building venting were observed during the site walkover. The site walkover being carried out on the 27th March 2025.

2.2 Current New Development

The Brewers Fayre Public House was demolished just prior to the production of this report and has been rebuilt with a new extension and car park to the existing Premier Inn hotel. Modifications to some existing hotel bedrooms have been carried out to create a new breakfast area.

The development continues to be used for commercial purposes.

A site layout is presented on drawings in Appendix A.

3.0 PREVIOUS INVESTIGATIONS

3.1 Introduction

Previous investigations of the site have comprised both desk study and intrusive investigations as listed in Section 1 of this text. A summary of findings relevant to the proposed remediation of the site is given in the following sections.

A full historical land use appraisal is presented in the NX Consulting Report (No. NX601 dated May 2025). In summary, the site comprised undeveloped agricultural land and playing fields, prior to the Premier Inn construction which was complete by 2010.

A summary of the environmental setting of the site was produced in the above referenced NX Consulting Reports and for ease of reference has been summarised in Section 2.2 below.

3.2 Environmental Setting

A summary of the environmental setting of the site pertinent to this report has been summarised below.

Issue	Summary
Geology & Mining	**Made Ground** - Not recorded on site or in the nearby surrounding area. **Drift** – On site: Glaciofluvial deposits (sand and gravel) **Solid** – Wilmslow Sandstone Formation (Sandstone) **Faults** – No inferred major faults exist within close proximity of the site. **Coal Mining** – The site is indicated to be within an area, which is unaffected by coal mining activities. **Other Mining -** None identified in the vicinity.
Hydrology	No surface water features within 250m of the site. Nearest feature is the River Mersey 409m south-east.
Hydrogeology	Drift - Superficial deposits classified as a Secondary A Aquifer. Bedrock – Principal Aquifer (high intergranular and/or fracture permeability, usually providing a high level of water storage and and may support water supply/river base flow on a strategic scale).
Landfills	None identified within 500m.
Flooding	A review of the Flood Map for Planning Service indicates that the site does not lie within Flood Zone 2 or 3. Ref flood-map-for-planning.service.gov.uk
Radon	The property is not in a radon affected area as less than 1% of homes are affected by radon (above the action level).

3.3 Fieldworks

An intrusive investigation was carried on the 4th April 2025.

Underground services were surveyed, and hand dug trial pits formed to a depth of 1.20 metres below ground level (m bgl) prior to the intrusive investigation; in line with NX Consulting health and safety methodology.

4no windowless sample boreholes, WS1.1 through to WS4.1 were undertaken across the site to a depth of 5.45m bgl.

The exploratory holes retrieved continuous soil samples; these were then logged by an on-site engineer and representative samples were taken for geotechnical and chemical analysis. Environmental sample collection was carried out in accordance with BS EN ISO 22475-1:2006. All soil and groundwater samples were collected using either clean stainless-steel utensils or clean disposable gloves and placed directly into clean containers provided by the laboratory.

Groundwater and gas monitoring wells were placed in 2no. of the boreholes (WS1.1 and WS3.1) on completion. Boreholes installations were installed to 3.00m depth with response zones in the made ground and sand. Gas monitoring was carried out beneath the proposed extension on 4no occasions. Response zones being formed within the made ground deposits and Glaciofluvial deposits.

General screening was conducted on a number of soil samples and tested for a general suite including the following: heavy metals and inorganic contaminants, cyanide, asbestos, sulphur and sulphate. No visual or olfactory evidence of solvent or hydrocarbon contamination was recorded during fieldworks and as a result analysis of these compounds was not deemed necessary.

Waste Acceptance Testing was carried out to enable materials to be classified prior to disposal to landfill; if deemed necessary by the appointed contractor.

Selected samples were also tested for speciated PAH analyses.

3.4 Ground Conditions

Ground conditions encountered across the site (during the NX investigation) comprised Made Ground to a maximum depth of 1.60mbgl. This comprised surface layers of Tarmac, block paving or grass over organic sand, sub-base or pipe bedding.

Underlying the Made Ground was silty slightly gravelly sand between depths of 0.90m to 5.45mbgl. Firm becoming stiff brown sandy clay was encountered within WS2.1 to WS4.1 between depths of 4.70mbgl to 5.45mbgl and bands of medium dense wet sand and gravel between depths of 3.50mbgl to 4.75mbgl.

3.5 Groundwater

The following groundwater observations were monitored within boreholes during drilling and subsequent monitoring:

Table 3.4.1 Groundwater Observations

Borehole No	Depth of groundwater Strike (m bgl)	Groundwater Level Monitoring Results (m bgl)
WS1.1	No Groundwater Encountered	2.59 - 2.77
WS2.1	3.70	-
WS3.1	4.65	Installation remained dry
WS4.1	3.30	-

3.6 Contamination Observations

No visual or olfactory evidence of hydrocarbon and/or solvent contamination was identified during drilling works.

3.7 Underground Service Plans

Underground services, soakaway tanks, BT Lines, gas mains, combined and foul sewers, CCTV and possible fibre optic cables may all impact the site and the design team and Client should familiarise themselves with their presence.

3.8 Below ground obstructions

No significant obstructions were encountered during the fieldworks.

4.0 CONTAMINATION ANALYSIS AND ASSESSMENT

The chemistry analysis results, presented in Appendix C of the NX site investigation were compared against the Tier 1 criteria for a *commercial* end use to reflect the development proposals.

The environmental chemistry results together with the findings of the preliminary intrusive investigation to date are consistent with the site's historical uses. Soil sampling of Made Ground has recorded contaminant concentrations below Tier 1 values for commercial end use. No visual or olfactory evidence of hydrocarbon or solvent contamination was encountered during the NX Consulting investigation and chemical analysis of the soils proved organic contaminants to be absent beneath the site.

Asbestos was not recorded during initial screening.

Remedial measures are only undertaken where unacceptable risk exists to human health or the environment. For a potential risk to be present there must be a viable pollutant linkage whereby a contamination source may impact upon a receptor.

Any areas of proposed landscaping and public open space will require imported subsoil/topsoil materials which will require chemical validation to demonstrate that they are suitable for a commercial end use. No specific cover system is proposed.

A watching brief was proposed during the enabling / construction works, to address any contamination issues arising during redevelopment. Specific measures relating to asbestos were recommended as outlined in the following paragraphs:

All Asbestos Containing Material (ACM) identified during the site enabling works must be dealt with in strict accordance with the Control of Asbestos Regulations (CAR) 2012, UK Waste Management Legislation and the Environmental Protection Act 1994.

As a contingency measure and to protect construction workers and future end users from any unrecorded asbestos contamination, we recommend that the following protective measures are adopted during the proposed ground preparatory works:

- All site personnel should be provided with PPE when excavations and demolition works are taking place.
- A water bowser or other dust suppression equipment shall be provided in order to dampen exposed surfaces; during the movement of plant and removal of arisings.
- Provision of personal monitors for site staff to measure individual exposure to asbestos fibres.

Should off-site disposal be required, then additional asbestos quantification and waste classification testing should be undertaken to ensure that it is classified correctly and disposed of at a suitably licenced facility.

All ACM impacted soils must be managed so as to ensure no airborne fibre release during construction or placement of impacted material in such a manner to ensure no future exposure risk.

Materials imported to site are required to be suitable for the intended commercial end use. Any areas of proposed landscaping and public open space will require imported subsoil/topsoil materials, although no specific cover system is required. Topsoil should be in line with BS 3882: 2015 'Specification for topsoil' within the clean cover system.

Site workers involved in excavations for foundations, roads, sewers etc during the construction works may come into direct contact with the soils containing unrecorded slightly elevated concentrations of inorganic and organic contaminants and asbestos (post demolition). We would therefore recommend

that simple precautionary measures be adopted during the construction phase i.e. good personal hygiene, provision of suitable welfare facilities and basic personnel protective equipment.

Risks to Controlled Water Receptors

The superficial deposits are classified a Secondary A aquifer and with the underlying bedrock is recorded as a Principal aquifer. There are no surface water features within 250m of the site.

No visual or olfactory evidence of contamination within the Made Ground was observed during soil sampling. Due to an absence of groundwater encountered across the majority of the site, limited leachate testing was undertaken.

Slight exceedances of benzo [b/k] fluoranthene, benzo [g,h,i] perylene & indeno [1,2,3] pyrene values within the Made Ground; at concentrations slightly exceeding the respective EQS screening values. The exceedances were considered to be marginal and given the distance to the nearest controlled water receptor and the development proposals, comprising predominantly hardstanding impermeable surfaces reducing infiltration, the risks to controlled water receptors post construction were deemed to be low. This will need to be confirmed with the local authority and Environment Agency.

4.1 Phytotoxicity

Phytotoxicity Guidance on the effects of metal contamination on plant growth is provided within the Ministry of Agriculture, Fisheries and Food (MAFF) Code of Good Agricultural Practice for the Protection of Soil.

Thresholds have not been exceeded within all samples analysed within the made-ground or natural soils with respect to the end use of the site.

Consequently, the associated risks are deemed to be low.

4.3 Development Constraints

The potential risks which may exist on the site should be readily managed through implementation of a watching brief to reduce uncertainty in the site conceptual model, good materials management and some basic mitigation measures to break the potential exposure pathways identified.

Works will be required to physically prepare the site for development and achieve the required stable development platform needed for the proposed buildings, car parking, access roads and supporting infrastructure. As this involves site disturbance and importation of materials and small amounts of soils for landscaped areas, the potential for introduction of new sources or creation of new pathways must be addressed.

The majority of the site is underlain by made ground comprising predominantly granular deposits. Relic footings associated with the former public house will need to be dealt with, potentially extending to depths of circa 2.00m bgl.

The following is a summary of the development constraints/conditions identified during the NX Consulting report, regarding to the proposed redevelopment of the site:

- Compliance with the requirements of the regulators i.e. Manchester City Council, the Environment Agency, service providers (e.g drainage, water, gas and electricity, fibre optics).

- The presence of existing foundations/slabs from demolition of the public house.
- The presence of a 1.60m thickness of Made Ground across the site.
- Active and relic site services not identified to date.
- Ground Gas Protection Measures are not required for proposed buildings, based upon gas monitoring to date.
- Placement of topsoil and subsoil within landscaping areas in line with Section 6 of Manchester City Council's Planning and Technical Guidance document relating to ground contamination, dated February 2021.

5.0 GROUND GAS PROTECTION

Recommendations & Gas Protection Design

In line with CIRIA 665 Guidance on Methane and Carbon Dioxide, the site is to be developed for commercial end use and no significant on or off site sources have been identified.

The ground gas investigation has identified a maximum carbon dioxide concentration of 3.0% with 0.1 maximum flow rate recorded to date. The maximum-recorded concentration for methane was 0.2%. In addition, hydrogen sulphide concentrations of 0.0 ppm were recorded.

The results indicate that no special gas protection measures are required for the development on site.

Soil testing indicates that there is a low risk of vapour generation and migration into the proposed buildings. No specific protection measures are proposed in relation to hydrocarbon contamination.

The property is not in a Radon Affected Area, as less than 1% of properties are above the Action Level. No radon protective measures are necessary.

We recommend that the local authority are approached to confirm their acceptance of the above recommendations.

6.0 REMEDIATION STRATEGY

6.1 Overview Of Remediation Strategy

Soil sampling of Made Ground has recorded contaminant concentrations below Tier 1 values for commercial end use. No visual or olfactory evidence of hydrocarbon or solvent contamination was encountered during the NX Consulting investigation and chemical analysis of the soils proved organic contaminants to be absent beneath the site. Asbestos Containing Material (ACM) was not found during soil sampling of made ground.

Risks to controlled waters were considered to be low following development and no gas control measures were proposed.

Based on the above, the remaining scope of works are considered as a requirement for the redevelopment of the site:

- Validation testing of imported topsoil to be used in landscaped areas.
- Maintain a watching brief during the enabling works, to ensure that any unidentified contaminant sources that come to light are appropriately dealt with.
- Validation of the remediated site in the form of a detailed Completion Statement confirming that the works set out in this document and agreed were completed and that the site is suitable for its intended use.

4.0 OBSERVATIONS AND RECORDS OF ACTIVITY

4.1 Cover Systems & Imported Soils

An engineer from NX Consulting visited the site on the 21st October 2026 and carried out an inspection of the landscaped areas. 4no. Hand dug pits were excavated in the new landscaping, which confirmed the imported topsoil thickness ranged from 150mm to >300mm.

The visual assessment of the topsoil confirmed the material was within the textural classification as topsoil in accordance with BS3882 (2015). The topsoil being described as a brown, slightly moist, sandy loamy clayey sand/sandy clay. No unusual odours or deleterious materials were observed. The landscape contractor for the development confirmed that they were satisfied with the thickness and depth of the topsoil within landscaped areas. Supplier certificates of testing for the topsoil source material and example consignment notes are included in Appendix A.

Medlock Construction confirmed that approximately 36m3 of Grade 1 topsoil was obtained from M&B Soils Limited. NX Consulting attended the source 'greenfield' site and conducted soil sampling on 5th October 2026. Three samples were analysed which equates to an approximate sampling frequency of 1 sample per 12m3 of topsoil imported, from a Greenfield source. The topsoil used was brought to site under 'Direct Transfer' from Wain Homes site, Mill Lane, Newton le Willows, WA12 8BS.



Figure 4.1.1 Greenfield Topsoil Source, Newton le Willows

The verification samples were sent to a UKAS and MCERTS accredited laboratory and the results compared to human health and metals considered toxic to plants. The concentrations that affect human health have been assessed for a *commercial end use* to reflect the development proposals of the extension of the Premier Inn. The results of the analysis are presented in the following table:

Summary of Tier 1 Exceedances					
Solid Contamination Results					
DETERMINAND	**No. of Samples**	**Range**	**Average**	**iAC**	**No of Exceedances**
Inorganics, Carbon and Asbestos					
Asbestos Quantification (%)	3	**No asbestos detected**		-	0
pH	3	7.6-7.8	7.7	-	-
Total Sulphate	3	451 - 521	481	-	-
Total Cyanide	3	<0.1 – 0.1	0.1	527	0
Sulphide	3	<10	<10	-	-
Total Organic Carbon (%)	3	3.6-3.8	3.73	1.2	-
Metals and Semi-Metals					
Arsenic	3	14 - 16	15	640	0
Cadmium	3	0.3	0.3	190	0
Chromium III	3	18 - 21	20	8600	0
Copper	3	50 - 54	52	68000	0
Lead	3	78 - 89	82	750	0
Mercury (Inorganic)	3	0.24 - 0.29	0.26	1100	0
Nickel	3	19 - 20	20	980	0
Selenium	3	<0.5	<0.5	1200	0
Zinc	3	81 - 96	87	730,000	0
Boron	3	0.3 - 0.6	0.5	240,000	0
Speciated Petroleum Hydrocarbons (TPH-CWG)					
TPH-CWG - Aliphatic >EC5 - EC6	3	< 0.01	< 0.01	7800	0
TPH-CWG - Aliphatic >EC6 - EC8	3	< 0.01	< 0.01	7800	0
TPH-CWG - Aliphatic >EC8 - EC10	3	< 0.01	< 0.01	2000	0

TPH-CWG - Aliphatic >EC10 - EC12	3	<1.50	<1.50	7800	0
TPH-CWG - Aliphatic >EC12 - EC16	3	< 1.2	<1.2	59000	0
TPH-CWG - Aliphatic >EC16 - EC21	3	< 1.5	<1.5	280000	0
TPH-CWG - Aliphatic >EC21 - EC35	3	< 3.4	<3.4	28000	0
TPH-CWG - Aliphatic (EC5 - EC35)	3	<10.0	<10.0	-	-
TPH-CWG - Aromatic >EC5 - EC7	3	< 0.01	< 0.01	26000	0
TPH-CWG - Aromatic >EC7 - EC8	3	< 0.01	< 0.01	56000	0
TPH-CWG - Aromatic >EC8 - EC10	3	< 0.01	< 0.01	3500	0
TPH-CWG - Aromatic >EC10 - EC12	3	< 0.9	< 0.9	16000	0
TPH-CWG - Aromatic >EC12 - EC16	3	< 0.5	<0.5	36000	0
TPH-CWG - Aromatic >EC16 - EC21	3	<0.6	<0.6	28000	0
TPH-CWG - Aromatic >EC21 - EC35	3	<1.4	<1.4	28000	0
TPH-CWG - Aromatic (EC5 - EC35)	3	<10.0	<10	-	-
Polynuclear Aromatic Hydrocarbons (PAHs)					
Naphthalene	3	< 0.03	<0.03	190	0
Acenaphthylene	3	<0.03	< 0.03	83,000	0
Acenaphthene	3	<0.03	<0.03	84,000	0
Fluorene	3	<0.03	<0.03	63,000	0
Phenanthrene	3	<0.03	0.03	22,000	0
Anthracene	3	<0.03	<0.03	520,000	0
Fluoranthene	3	< 0.03 – 0.04	0.04	23,000	0
Pyrene	3	< 0.03 – 0.04	0.04	54,000	0
Benzo(a)anthracene	3	< 0.03	<0.03	170	0
Chrysene	3	< 0.03	<0.03	350	0
Benzo(b)fluoranthene	3	< 0.03	< 0.03	44	0

Benzo(k)fluoranthene	3	< 0.03	< 0.03	1200	0
Benzo(a)pyrene	3	< 0.03	< 0.03	35	0
Indeno(1,2,3-cd)pyrene	3	< 0.03	< 0.03	500	0
Dibenz(a,h)anthracene	3	< 0.03	< 0.03	3.5	0
Benzo(ghi)perylene	3	< 0.03	< 0.03	3900	0
Total PAH (Sum of USEPA 16)	3	< 0.03	< 0.03	-	0

Of the potential contaminants determined, none was found at levels that exceeded their guideline values. Of the phytotoxic (toxic to plants) contaminants determined (copper, nickel, zinc), none was found at levels that exceeded the maximum permissible levels specified in BS3882:2007 – Table 1.

We consider that soils do not pose a significant risk to human health and controlled water receptors and that the imported topsoil materials are suitable for use in landscaped areas.

Other soils imported to site were carried out under the Wrap protocol and deemed to be 'first generation' by the contractor and validation by NX Consulting was not requested.

Medlock Construction confirmed that a watching brief had been undertaken during the redevelopment work and that no potential contamination issues arose.

Exported Soils & Topsoil

Medlock Construction have confirmed that the total volume of soils & slab bases/foundations disposed off-site equates to approximately 1375m^3 The details have been assessed from information provided by the contractor. Example copies of which are presented in Appendix C.

Receiving Station	Date of Activity	Registered Waste Carriers Licence	Nature of Materials	Volume	No of Validation Sampled
Cheshire Soils and Aggregates Ltd, Aggregate Recycling Facility, 40 Thomas Street, Manchester, M32 0JT	14/01/26 - 20/10/26	CBDU441701	Foundation arising / Drainage Arising/external slab bases	1375m^3	
Topsoil Source	**Date of Activity**	**Registered Waste Carriers Licence**	**Nature of Materials**	**Volume**	**No of Validation Sampled**
Wain Homes site, Mill Lane, Newton le Willows, WA12 8BS	16/11/2020	CBDU101751	Topsoil for landscape areas	36m3	3

5.0 REFINED CONCEPTUAL MODEL

The development involved a 'best sustainable approach' to remediation of contamination; involving a minimal approach with respect to the removal and disposal of contaminated materials from site. Minimum volumes of material were moved around the site, limiting site workers and neighbours to dust, noise and visual intrusion. Minimum materials were taken off site thus conserving landfill space locally and minimising lorry movements onto local roads from the site.

Risks posed to each of the identified potential receptors are discussed separately and assessed against a low, moderate or high scale.

Site Occupiers/Groundworkers/Landscape Contractors

No elevated contaminants were recorded as part of the Phase II site investigation works. The site is to be covered by majority building cover and hardstanding, which would break the pollutant linkage between any contaminated soils and end users of the site. Clean imported topsoil has been used in new landscaped areas, with validation testing confirming its suitability for a commercial end use.

The ground gas risk assessment undertaken as part of the Phase II investigations identified no gas protection measures were required in line with CIRIA 665 guidelines.

Risk is assessed as low post construction.

Controlled Waters

Slight exceedances of leachable benzo [b/k] fluoranthene, benzo [g,h,i] perylene & indeno [1,2,3] pyrene values within the Made Ground were recorded at concentrations slightly above the respective EQS screening values. The exceedances were considered to be marginal. The presence of hardstanding and full building cover will reduce/eliminate infiltration.

In terms of creating migration pathways to the underlying Secondary Aquifer (drift deposits) and Principal Aquifer (bedrock), the risks are deemed to be low. No surface water receptors are present within 250m.

Risk is assessed as low post construction.

Water Supply

Protect-A-line type barrier pipe has been used for a new line of private water supply to the building. This matches the existing hotel specification and the associated risks to human health receptors are deemed to be low.

Risk is assessed as low post construction.

Occupiers of Adjacent Land

No significant risks to occupiers of adjacent land have been identified.

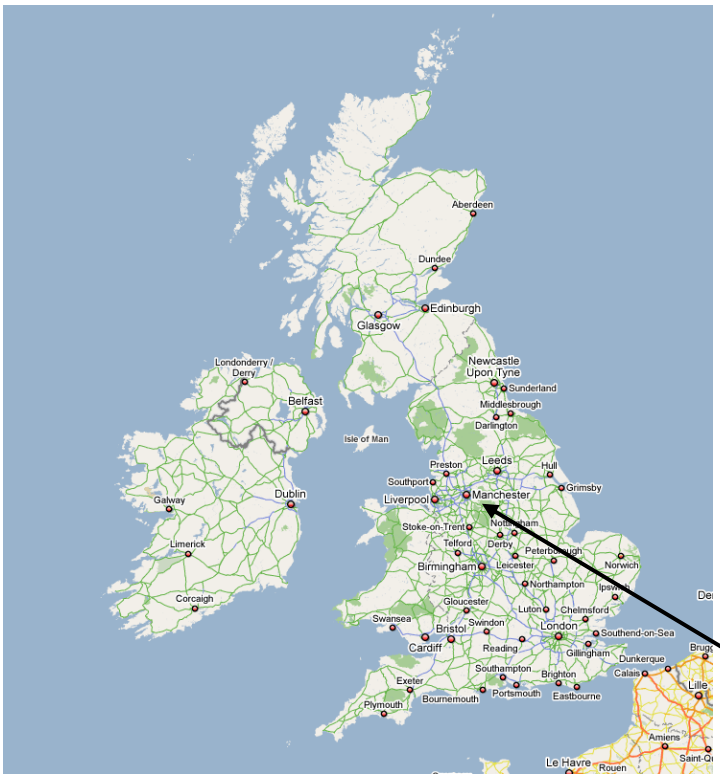
Risk is assessed as low post construction.

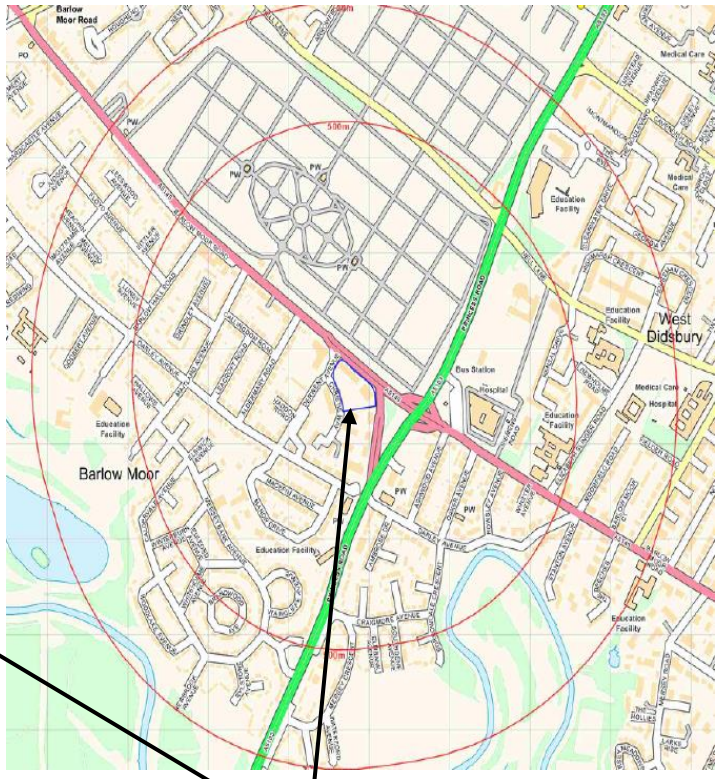
Flora and Fauna

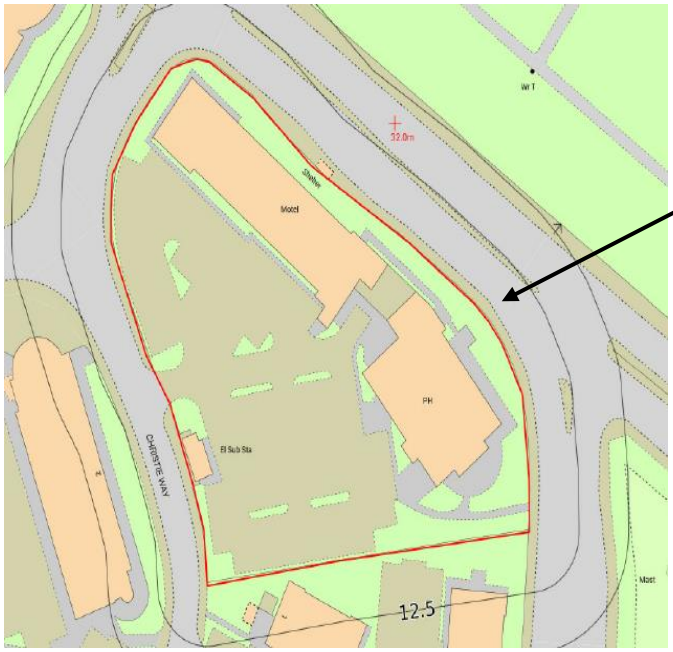
Imported topsoil is suitable for a commercial end use in terms of phytotoxic risk to identified receptors.

Risk is assessed as low post construction.

A - Drawings, Photographs, & Contractor Supporting Evidence







SITE LOCATION

Next Generation Engineering Consultancy Services

Tel: 0161 904 0187
E-mail: admin@nxconsulting.org.uk
Web: www.nxconsulting.org.uk

Ref: NX601 Figure 1

Project:

Premier Inn Hotel Extension, Christie Fields Business Park, Derwent Ave, Manchester M21 7QS,

Title:

Site Location Plan



EXISTING SITE PLAN
SCALE 1:500

0 10m 20m 30m 40m 50m
SCALE 1:500 IN METRES

PHD	DRAWN	22/3/24	
DRAWN	REVISION	DATE	VER

ALLISON PIKE
ARCHITECTS & DESIGNERS

7 Buxton Road West, Disley,
Stockport, Cheshire, SK12 2AE
Website: www.allisonpike.com

Telephone: 01663 763000
Facsimile: 01663 766772
Email: studio@allisonpike.com

© Allison Pike Partnership Limited.

PROJECT
PREMIER INN EXTENSION
MANCHESTER WEST DIDSBURY

TITLE
EXISTING SITE PLAN

SCALE
1:500 @ A3

JOB No	DRAWING No	REV
PI1077	AP1	



PROPOSED SITE PLAN
SCALE 1:500

0 10m 20m 30m 40m 50m
SCALE 1:500 IN METRES

PHD	DRAWN	22/3/24	
DRAWN	REVISION	DATE	VER

ALLISON PIKE
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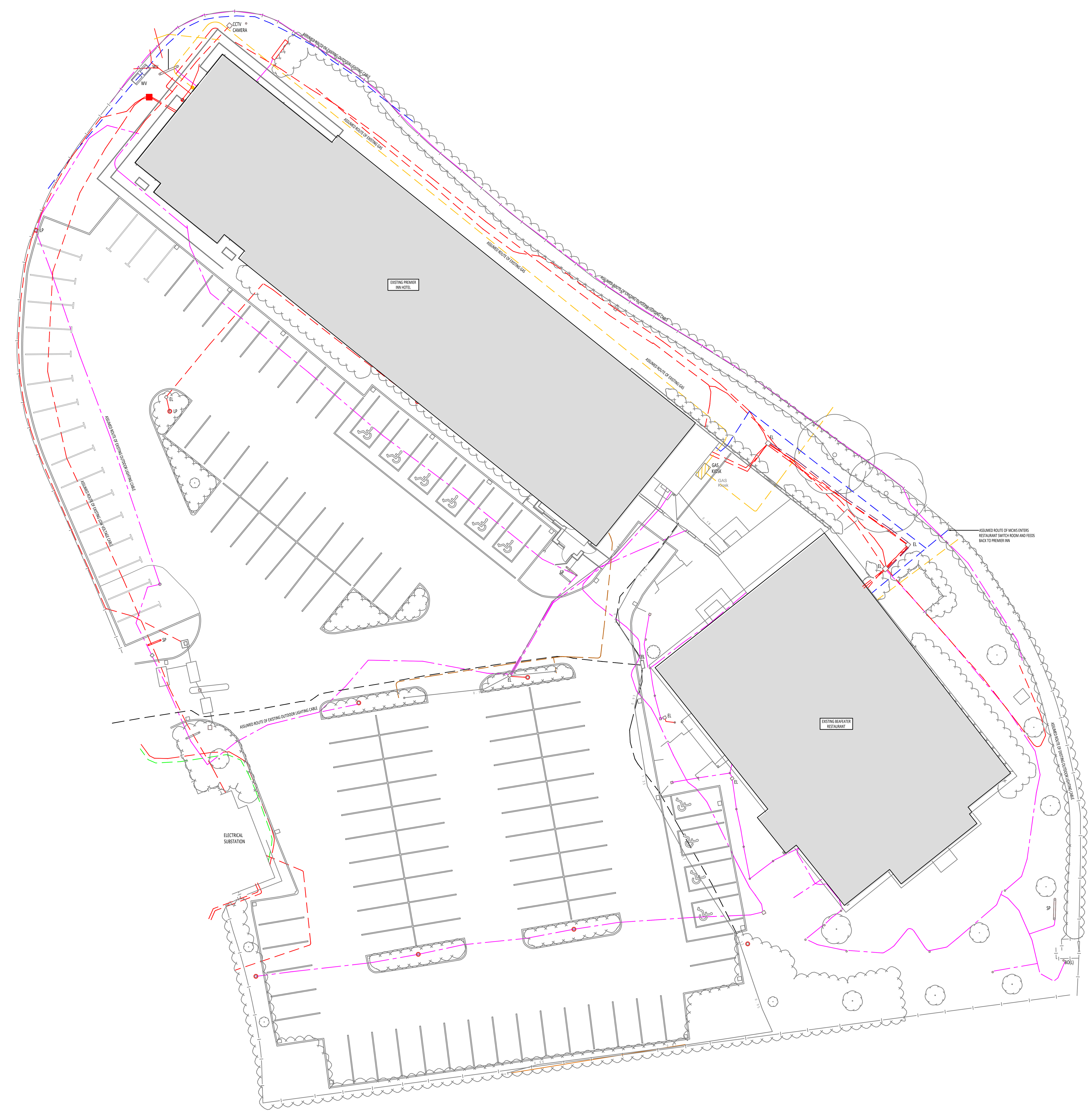
© Allison Pike Partnership Limited.

PROJECT
PREMIER INN EXTENSION
MANCHESTER WEST DIDSBURY

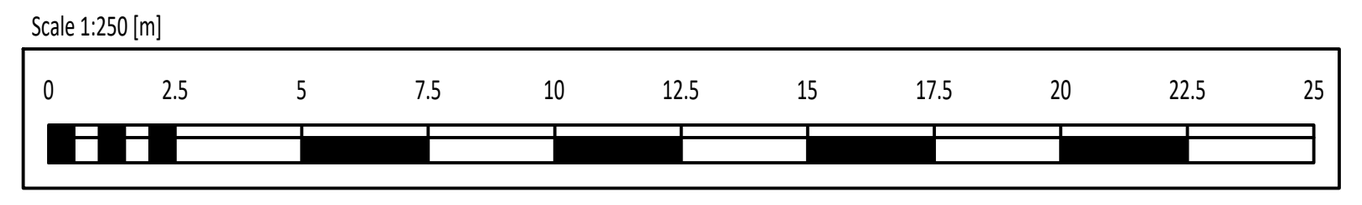
TITLE
PROPOSED SITE PLAN

SCALE
1:500 @ A3

JOB No	DRAWING No	REV
P11077	AP3	



EXISTING SITE PLAN (1:250)
MECHANICAL & ELECTRICAL SITE SERVICES LAYOUT



C8804-TLP-00-00-DR-ME-901 Existing M&E Site Services, 14/04/2025 14:39:13

INCOMING STAT CAPACITY INFORMATION (GAS)	
DETAILS	
MPRN Number	-
MSN Number	-
Meter Size (m3/hr)	-
Current Assigned Capacity (m3/hr)	- m3/hr
Estimated Future Max Capacity After Extension Added (m3/hr)	- m3/hr

INCOMING STAT CAPACITY INFORMATION (ELEC)	
DETAILS	
MPAN Number	-
MSN Number	-
Current Assigned Capacity (KVA)	- KVA
Max Demand (KVA)	- KVA
Estimated Future Max Capacity After Extension Added (KVA)	- KVA
Voltage Regulation Installed (EMS/Powerstar)	-

EXISTING SITE SERVICES RISK LEGEND	
SYMBOL	DESCRIPTION
RISK 1	RISK 1 - EXISTING SERVICES TO MAKE SAVE PRIOR TO STRIP OUT.

SERVICES OVERVIEW

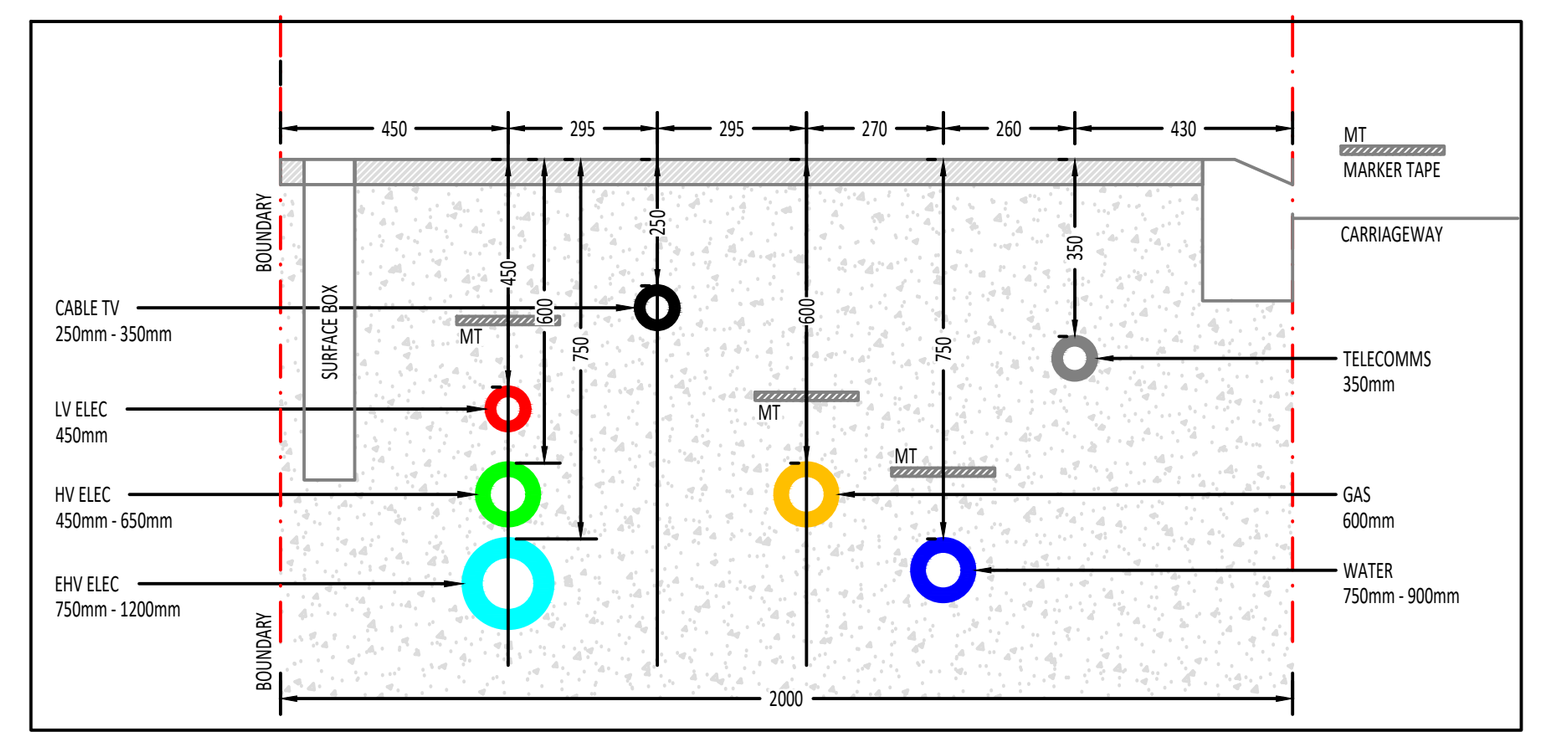
STATUTORY DIVERSIONS/UPGRADES REQUIRED

1. GAS NO DIVERSION OR UPGRADE REQUIRED
2. WATER NO DIVERSION OR UPGRADE REQUIRED
3. ELEC NO DIVERSION OR UPGRADE REQUIRED
4. BT NO DIVERSION OR UPGRADE REQUIRED

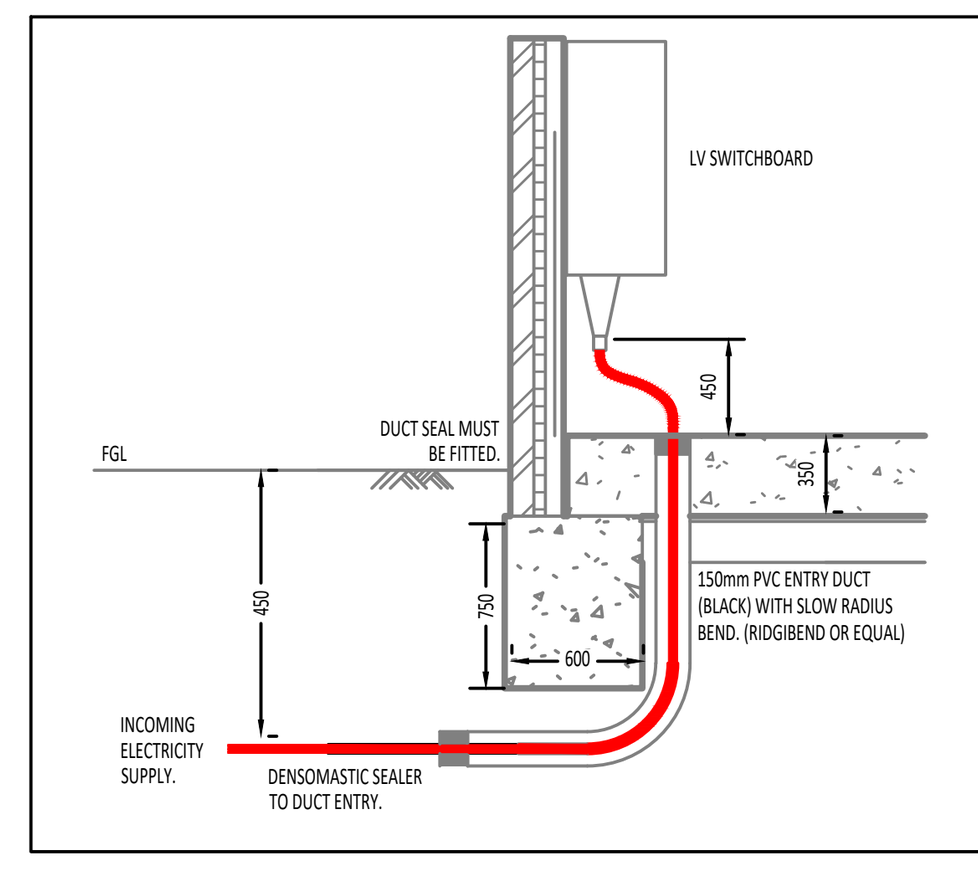
PRIVATE DIVERSIONS/UPGRADES REQUIRED

1. GAS NO DIVERSION OR UPGRADE REQUIRED
2. WATER NO DIVERSION OR UPGRADE REQUIRED
3. ELEC NO DIVERSION OR UPGRADE REQUIRED

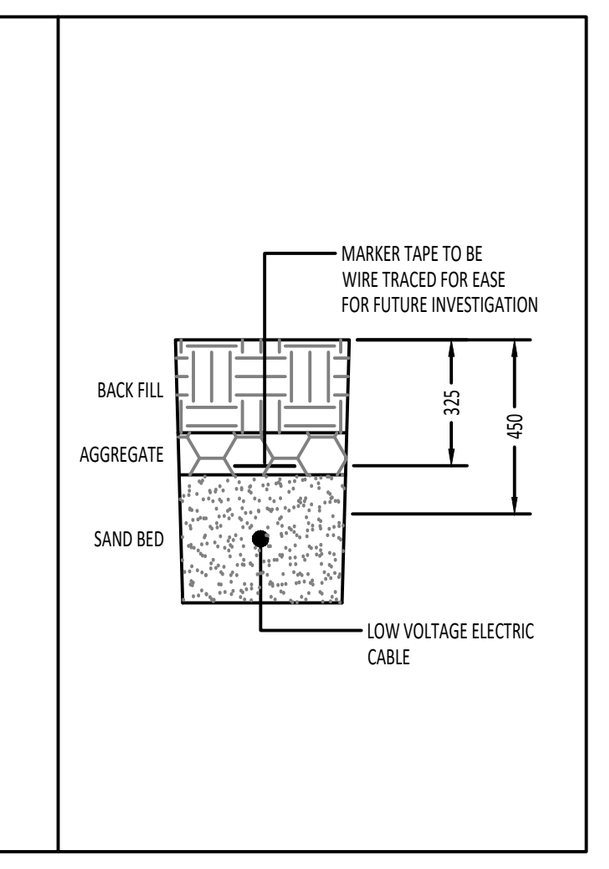
BELOW GROUND SERVICE LEGEND	
SYMBOL	DESCRIPTION
— — — (green)	EXISTING UNDERGROUND HIGH VOLTAGE ELECTRICITY CABLE ROUTE. 650mm BELOW GROUND LEVEL.
— HV —	PROPOSED UNDERGROUND HIGH VOLTAGE ELECTRICITY CABLE ROUTE. 650mm BELOW GROUND LEVEL.
— — — (red)	EXISTING UNDERGROUND LOW VOLTAGE ELECTRICITY CABLE ROUTE. 450mm BELOW GROUND LEVEL.
— LV —	PROPOSED UNDERGROUND LOW VOLTAGE ELECTRICITY CABLE ROUTE. 450mm BELOW GROUND LEVEL.
— - — (red)	EXISTING UNDERGROUND LV CABLE ROUTE FOR EXTERNAL LIGHTING COLUMNS.
— L —	PROPOSED UNDERGROUND LV CABLE ROUTE FOR EXTERNAL LIGHTING COLUMNS. **ROUTE TBC BY ELECTRICAL CONTRACTOR.**
— — — (blue)	EXISTING UNDERGROUND MAINS COLD WATER PIPE ROUTE. 750mm BELOW GROUND LEVEL.
— MCW —	PROPOSED UNDERGROUND MAINS COLD WATER PIPE ROUTE. 750mm BELOW GROUND LEVEL.
— — — (yellow)	EXISTING UNDERGROUND GAS PIPE ROUTE. 600mm BELOW GROUND LEVEL.
— GAS —	PROPOSED UNDERGROUND GAS PIPE ROUTE. 600mm BELOW GROUND LEVEL.
— — — (purple)	EXISTING UNDERGROUND COMMS ROUTE. 350mm BELOW GROUND LEVEL
— COMMS —	PROPOSED UNDERGROUND COMMS ROUTE. 350mm BELOW GROUND LEVEL
— — — (black)	EXISTING UNDERGROUND BT ROUTE. 350mm BELOW GROUND LEVEL
— BT —	PROPOSED UNDERGROUND BT ROUTE. 350mm BELOW GROUND LEVEL
— — — (brown)	EXISTING UNDERGROUND CCTV CABLE ROUTE. 450mm BELOW GROUND LEVEL.
—— (cyan)	UNKNOWN UNDERGROUND CABLE /PIPE.



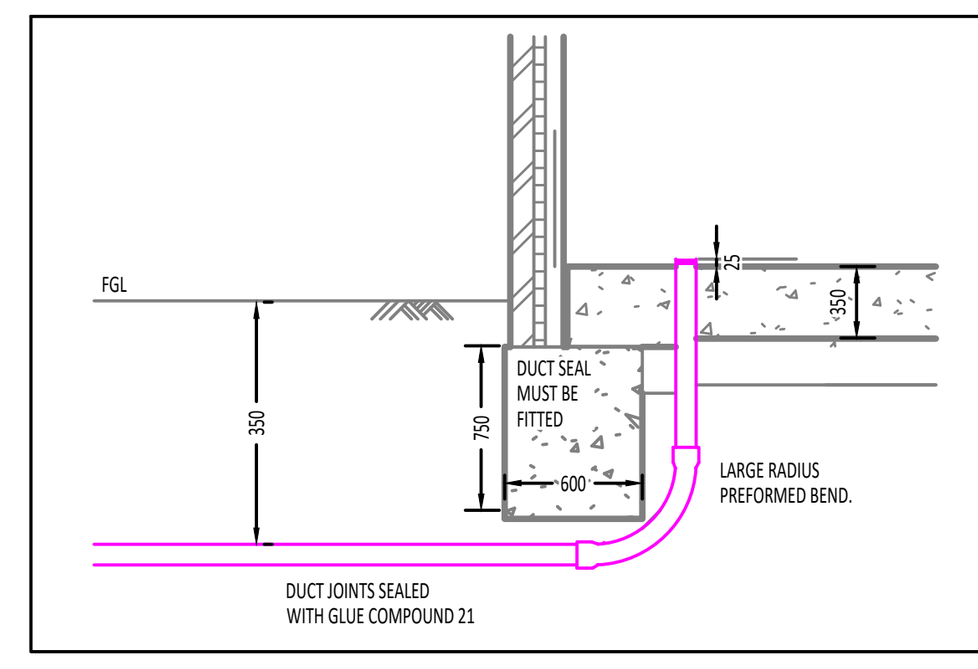
RECOMMENDED POSITIONING OF UTILITY APPARATUS N.T.S



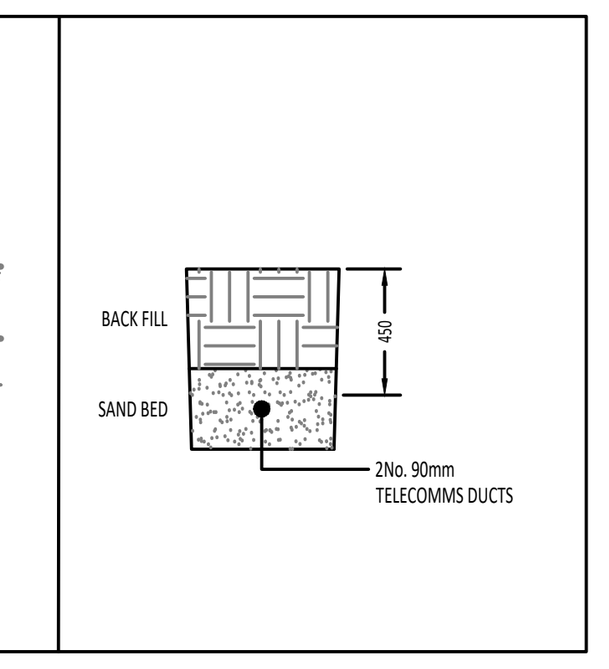
TYPICAL ELECTRICAL DUCT ENTRY DETAIL N.T.S



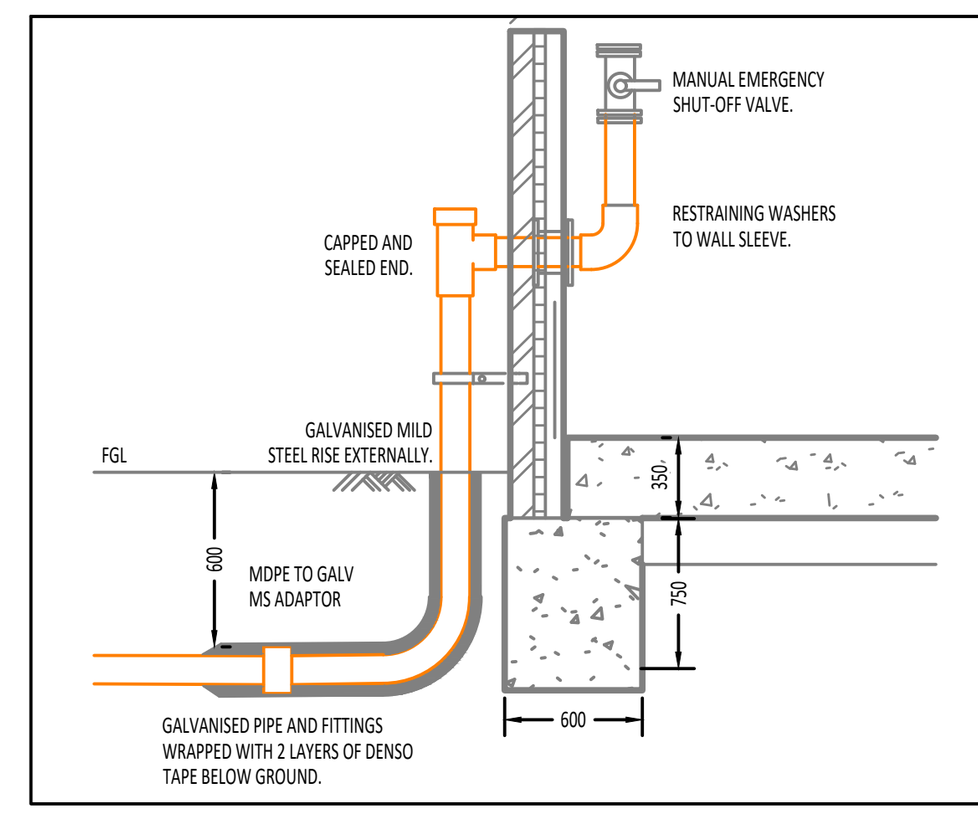
TYPICAL ELECTRICAL TRENCHING DETAIL



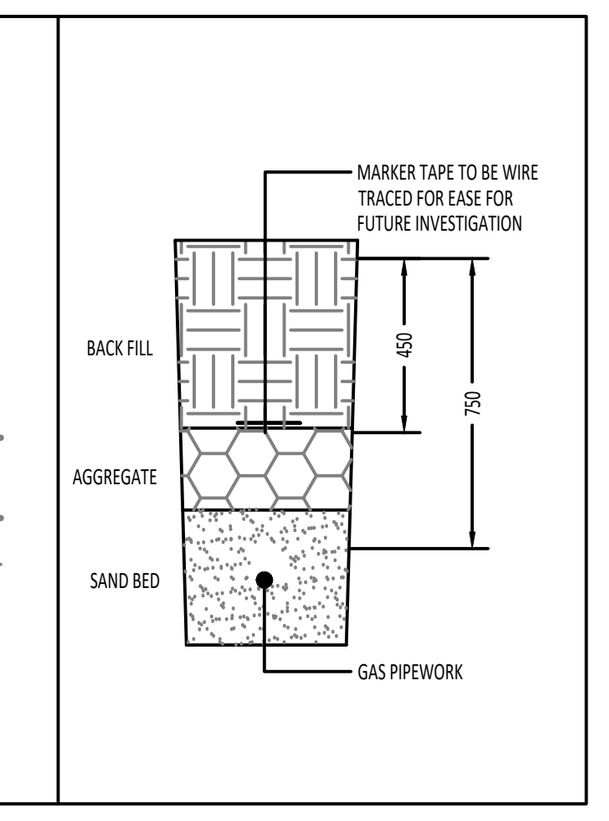
TYPICAL TELEPHONE DUCT ENTRY DETAIL N.T.S



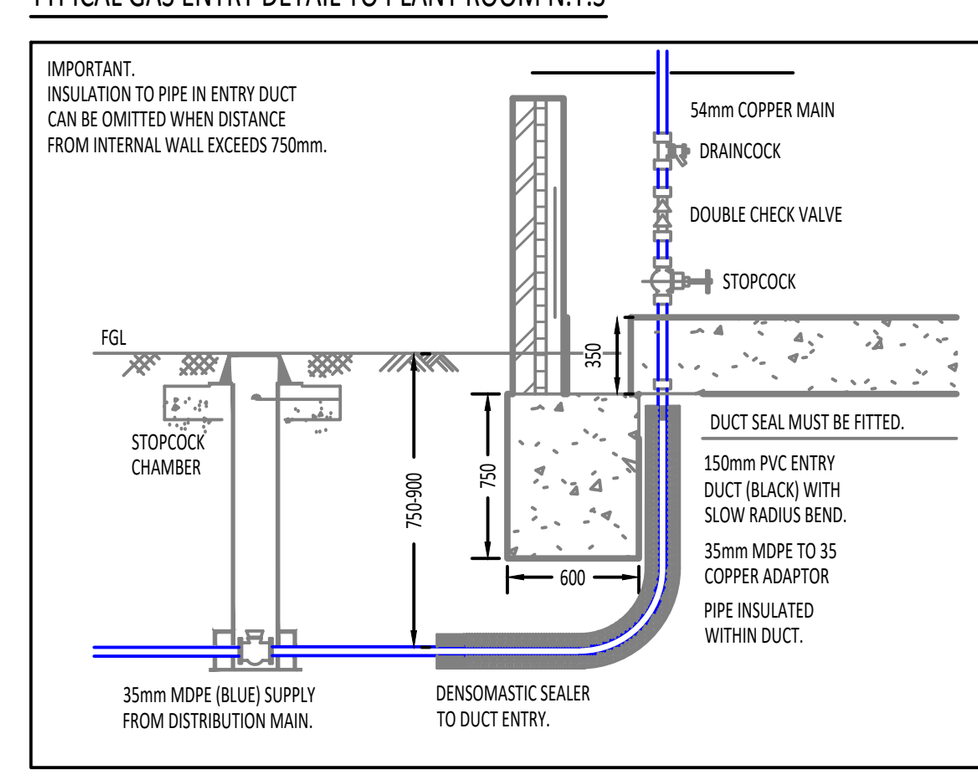
TELECOMMS DUCT TRENCHING DETAIL



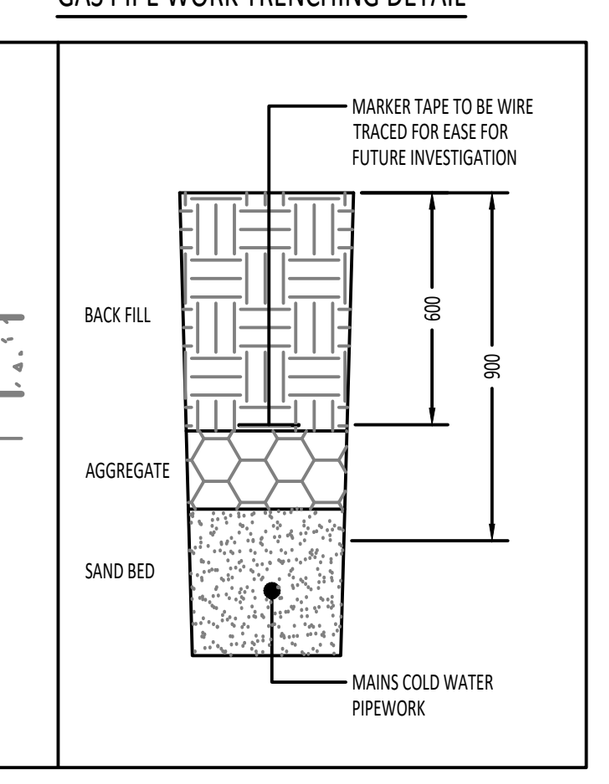
TYPICAL GAS ENTRY DETAIL TO PLANT ROOM N.T.S



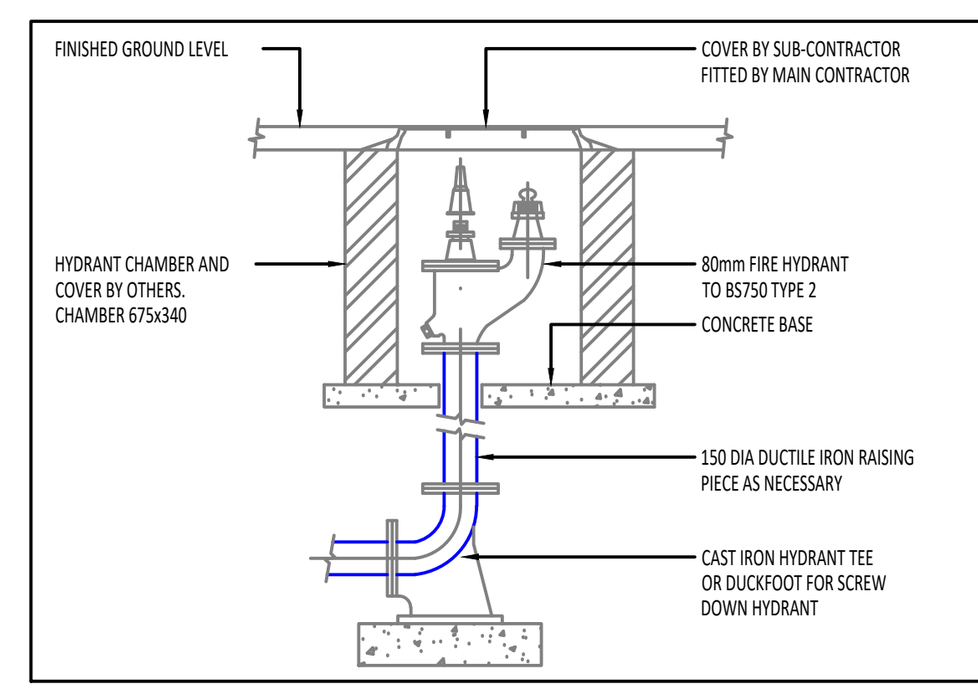
GAS PIPE WORK TRENCHING DETAIL



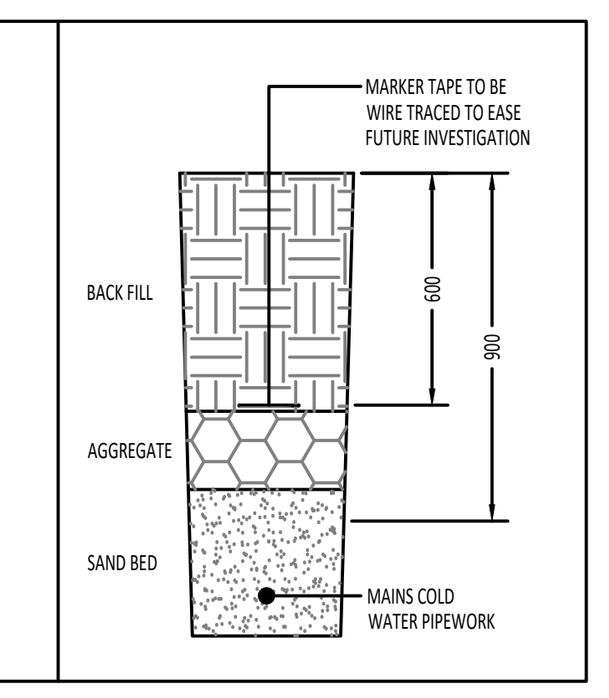
TYPICAL MAINS WATER ENTRY DETAIL TO PLANT ROOM N.T.S



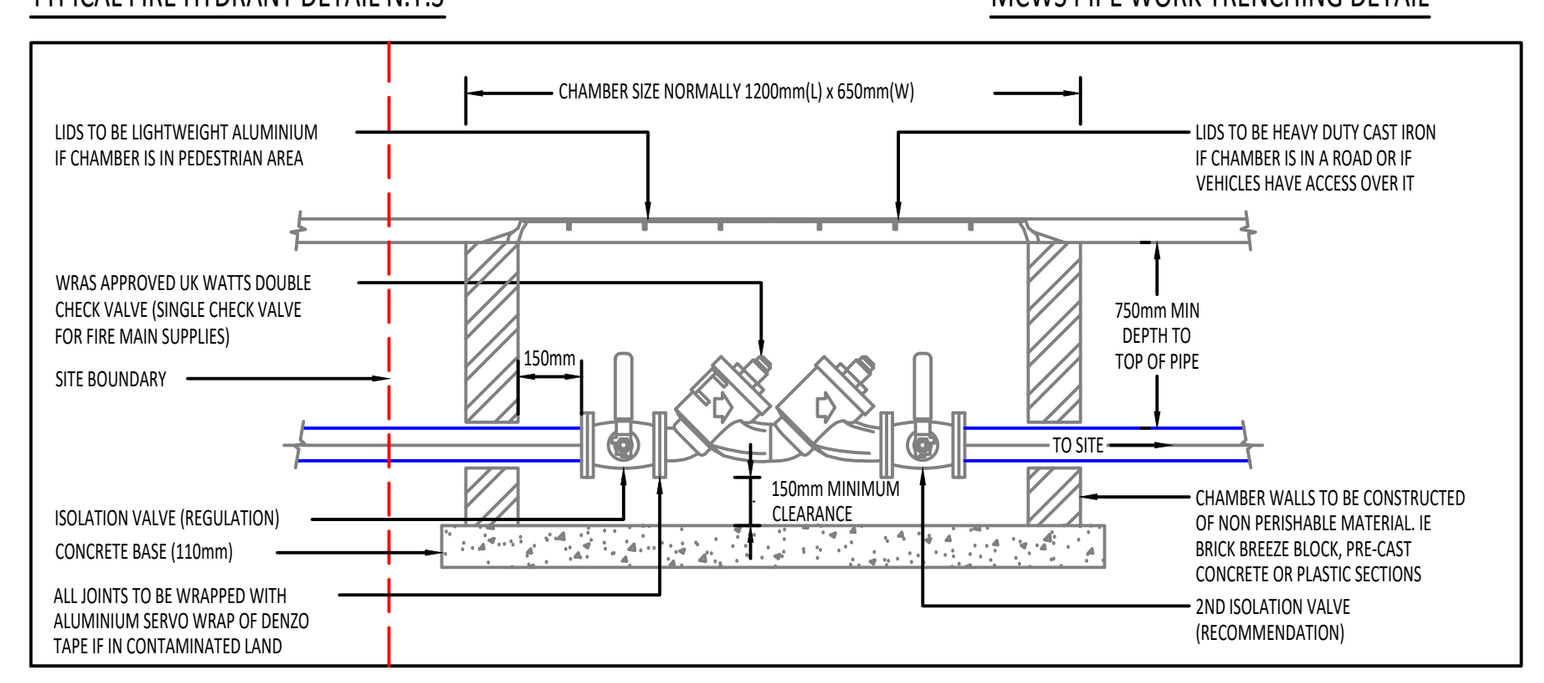
MCWS PIPE WORK TRENCHING DETAIL



TYPICAL FIRE HYDRANT DETAIL N.T.S



MCWS PIPE WORK TRENCHING DETAIL



TYPICAL FIRE HYDRANT CHAMBER DETAIL N.T.S

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NOTES

THE GENERAL ELECTRICAL INSTALLATION WORK SPECIFICALLY HAS BEEN INSTALLED AND CONFORMS TO/COMPLIES WITH, THE FOLLOWING CURRENT STANDARDS, REGULATIONS AND ALL RECOMMENDATIONS COVERED UNDER BRITISH STANDARDS, UNLESS OTHERWISE DETAILED ELSEWHERE IN THIS SPECIFICATION:-

- THE REGULATIONS FOR ELECTRICAL INSTALLATIONS, LATEST EDITION, AS ISSUED BY THE INSTITUTION OF ENGINEERING AND TECHNOLOGY, (HEREINAFTER REFERRED TO AS THE IET 18TH EDITION WIRING REGULATIONS BS7671).
- THE REGULATIONS OF UK AND RELATED GOVERNING BODIES
- THE ELECTRICITY SAFETY, QUALITY & CONTINUITY REGULATIONS 2002.
- THE ELECTRICITY SUPPLY AUTHORITY GENERAL AND LOCAL REQUIREMENTS.
- ALL RELEVANT BRITISH STANDARD SPECIFICATIONS AND CODES OF PRACTICE.
- LOCAL FIRE OFFICERS REQUIREMENTS.
- THE FIRE PRECAUTIONS (WORKPLACE) REGULATIONS 1997.
- THE ELECTRICITY SUPPLY AUTHORITY GENERAL AND LOCAL REQUIREMENTS.
- DISABILITY & DISCRIMINATION ACT (DDA)
- BS5266-1 2016 EMERGENCY LIGHTING
- PART L2B - EXISTING NON DWELLING 2016
- ALL SUBSEQUENT AMENDMENTS TO THE ABOVE.

GENERAL

ALL ON-SITE TRENCHES SHALL BE EXCAVATED AND BACKFILLED WITH CLEAN MATERIAL BY THE GROUNDWORKS CONTRACTOR TO THE SATISFACTION OF THE C.A.

TRENCHES SHALL BE EXCAVATED TO ALLOW FOR A SAND BED LAYER OF 50MM THICKNESS UNLESS OTHERWISE INDICATED.

WHERE DUCTS ARE WITHIN BUILDING STRUCTURE OR BELOW HIGHWAYS ETC. THE DEPTH AND LOCATION SHALL BE CONFIRMED BY THE STRUCTURAL ENGINEER REGARDING CONSTRUCTION SUITABILITY.

ALL SERVICES BELOW HIGHWAYS OR CONCRETE HARD STANDING SHALL BE INSTALLED WITHIN TWIN WALLED RIGIDUCTS
ALL INFORMATION ILLUSTRATED ON THIS DRAWING IS INDICATIVE & THE CONTRACTOR SHALL ENSURE THAT EXISTING SITE SERVICES ARE LOCATED BY C.A.T. SCAN OR OTHER METHODS AS APPROPRIATE, SO AS TO ENABLE ANY LIVE SUPPLY SERVING ADJACENT PROPERTIES TO BE MAINTAINED.

ALL NECESSARY TRIAL HOLES EXCAVATED TO LOCATE PRIVATE SITE SERVICES SHALL BE DUG BY HAND AND THE RESULTS RECORDED ON EXISTING SITE SERVICES DRAWING.

WHERE EXCAVATING IN THE VICINITY OF LIVE SITE SERVICES APPROPRIATE HEALTH & SAFETY REQUIREMENTS SHALL BE APPLIED AT ALL TIMES.

WHERE EXCAVATING CLOSE TO STATUTORY AUTHORITY SUPPLIES THE AUTHORITIES HEALTH & SAFETY REQUIREMENTS SHALL BE APPLIED.

THIS DRAWING SHALL BE READ IN CONJUNCTION WITH STATUTORY AUTHORITY DRAWINGS.

THE CONTRACTOR SHALL ASCERTAIN THE LOCATION OF ALL EXISTING SERVICES PRIOR TO THE COMMENCEMENT OF ANY EXCAVATION WORK.

WATER SERVICES

ALL BURIED WATER SERVICES SHALL BE INSTALLED USING 'BLUE' MEDIUM DENSITY POLYETHYLENE PIPES (MDPE) TO BS 6572 LAID WITH A MINIMUM COVER OF 900mm & METAL TRACE MARKER TAPE TO B E INSTALLED OVER THE FULL LENGTH OF PIPEWORK RUN (IDENTIFIABLE FROM GROUND LEVEL). THE ON-SITE MAINS SHALL BE SUBJECTED TO A PRESSURE TEST OF 10 BAR PRIOR TO BACKFILLING COMMENCING AND SHALL BE WITNESSED BY THE C.A. A FINAL TEST SHALL BE CARRIED OUT ON COMPLETION. A CHLORINATION INJECTION TEE SHALL BE PROVIDED ON THE WATER MAINS AT THE CONNECTION POINT TO THE SUPPLY PIPE. CHLORINATION WILL BE THE RESPONSIBILITY OF THE CONTRACTOR.

ELECTRICAL SERVICES

ALL NEW ELECTRICAL DUCTS SHALL BE RIGIDUCT TYPE COMPLETE WITH EASYSWEEP BENDS
ALL NEW ELECTRICAL DUCTS SHALL BE PROVIDED A MINIMUM 2xNo. DRAW CORDS

TLP LAYOUTS FOR TENDER PURPOSES ONLY
CONSTRUCTION DRAWINGS TO BE PROVIDED
BY THE M&E CONTRACTOR ONCE ON SITE.

THIS DRAWING IS PRODUCED IN ACCORDANCE WITH
ARCHITECTS/MAIN CONTRACTORS DRAWING REFERENCE

\PI1077 AL8 PROPOSED SITE PLAN

REV	DESCRIPTION	DRN	CHK	DATE
T1	STAGE 4 ISSUE	JW	MT	XX.XX.XX

STAGE 4

Client
Whitbread PLC
Whitbread Court
Houghton Hall Business Park
Porz Avenue
Dunstable
LU5 5XE

Architect
Allison Pike Architects
7 Buxton Road West,
Disley, Stockport,
Cheshire, SK12 2AE
Tel: 01663 763000
www.allisonpike.com

Thornley & Lumb
Building Services Consultant Engineers
Head Office:
Century House, 257 Cutler Heights Lane
Bradford, West Yorkshire, BD4 9JG
Telephone: +44(0)12 7468 7755
Southern Office:
2nd Floor, 216 Tower Bridge Road
London, WC2N 6AA
Telephone: +44(0)20 7520 9355
www.thornleylumb.co.uk info@thornleylumb.co.uk

Project Number: C8804
Project Name: PI Manchester W Didsbury
Christie Fields Business Pk, Derwent Avenue, M21 7QS

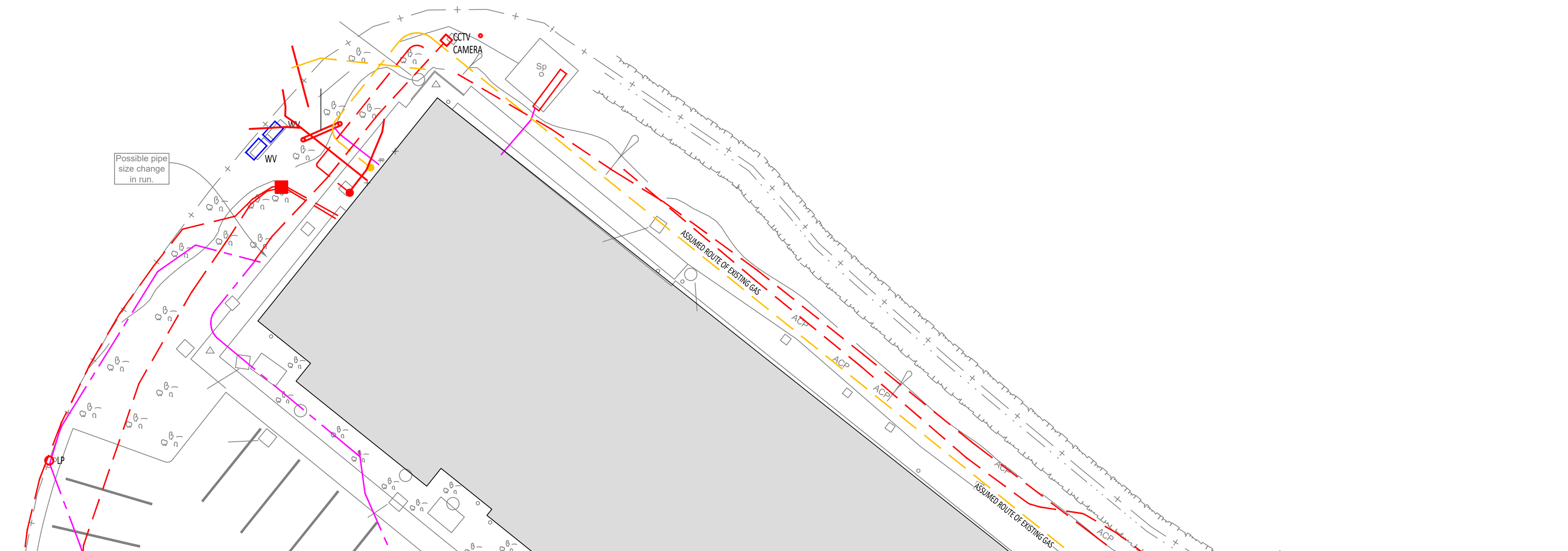
Drawing Title
Existing Site Plan
Mechanical & Electrical Site Services Layout

Engineer	Checked by	Drawn By
DS	MT	JW

Date	Scale	Size
04.04.25	1:250	A1

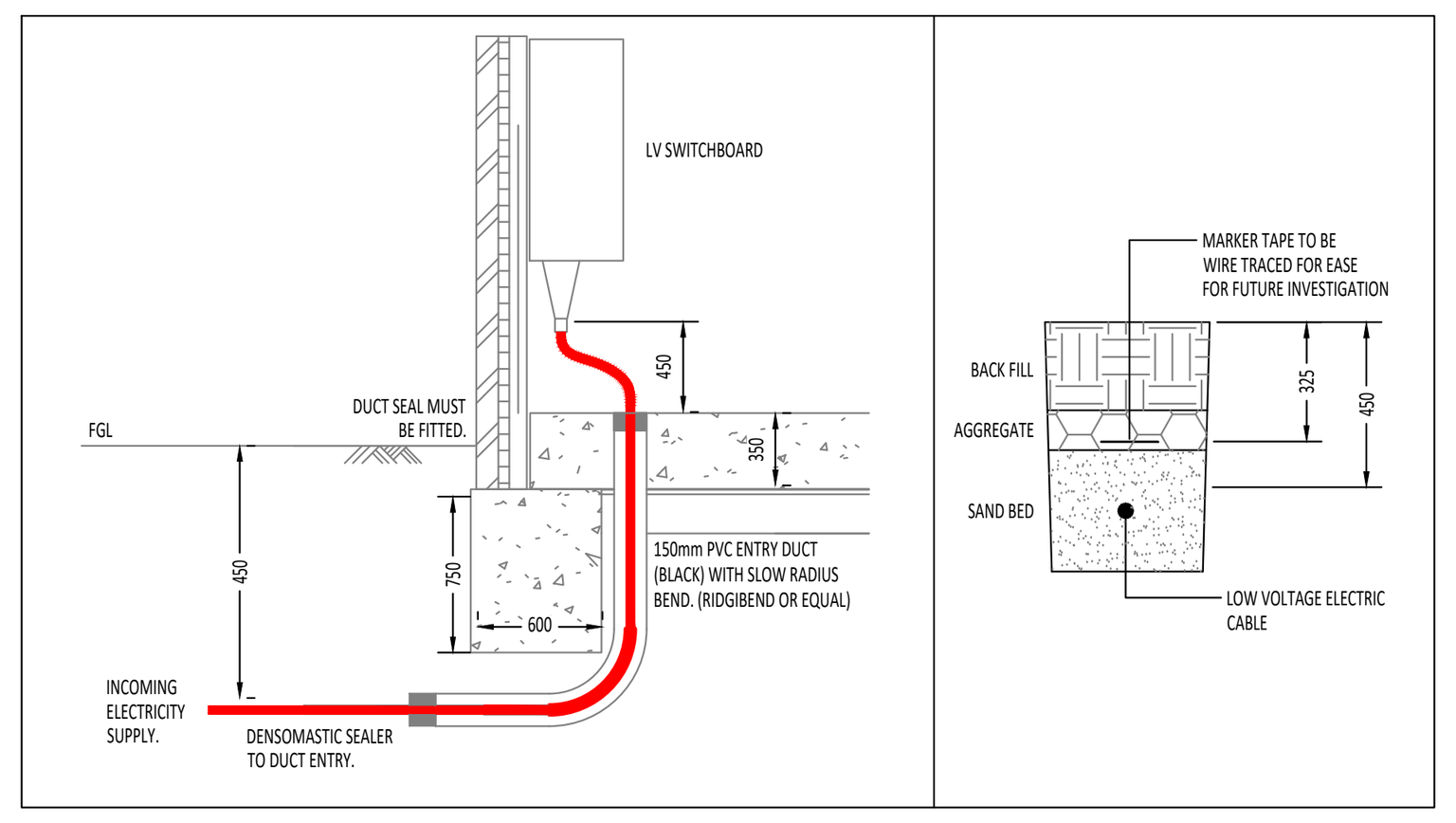
Drawing Number

Project	Originator	Volume	Level	Type	Role	Number	Revision
C8804 -	TLP -	00 -	XX -	DR -	E -	901	T1



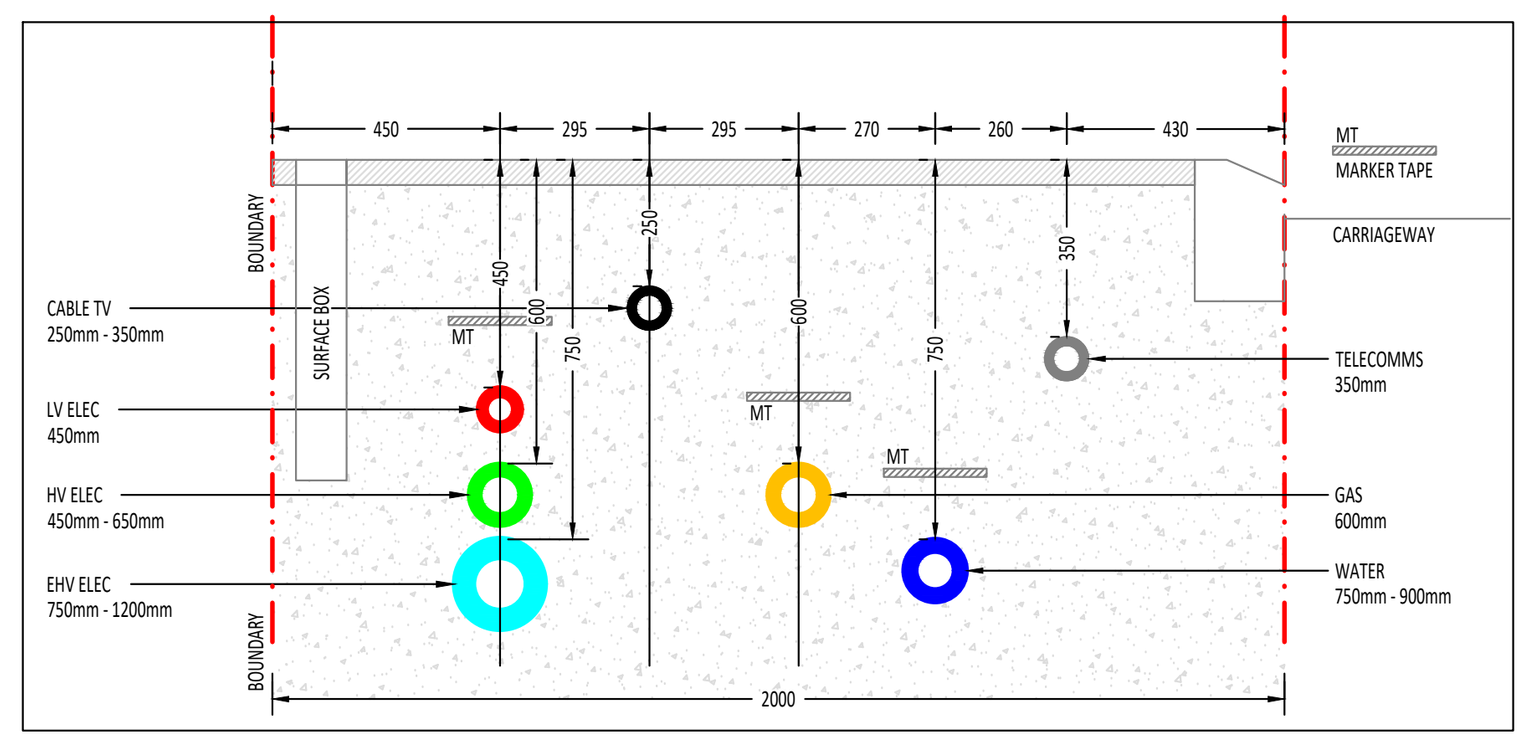

PROPOSED SITE PLAN (1:250)
MECHANICAL & ELECTRICAL SITE SERVICES LAYOUT

Scale 1:250 [m]
0 2.5 5 7.5 10 12.5 15 17.5 20 22.5 25

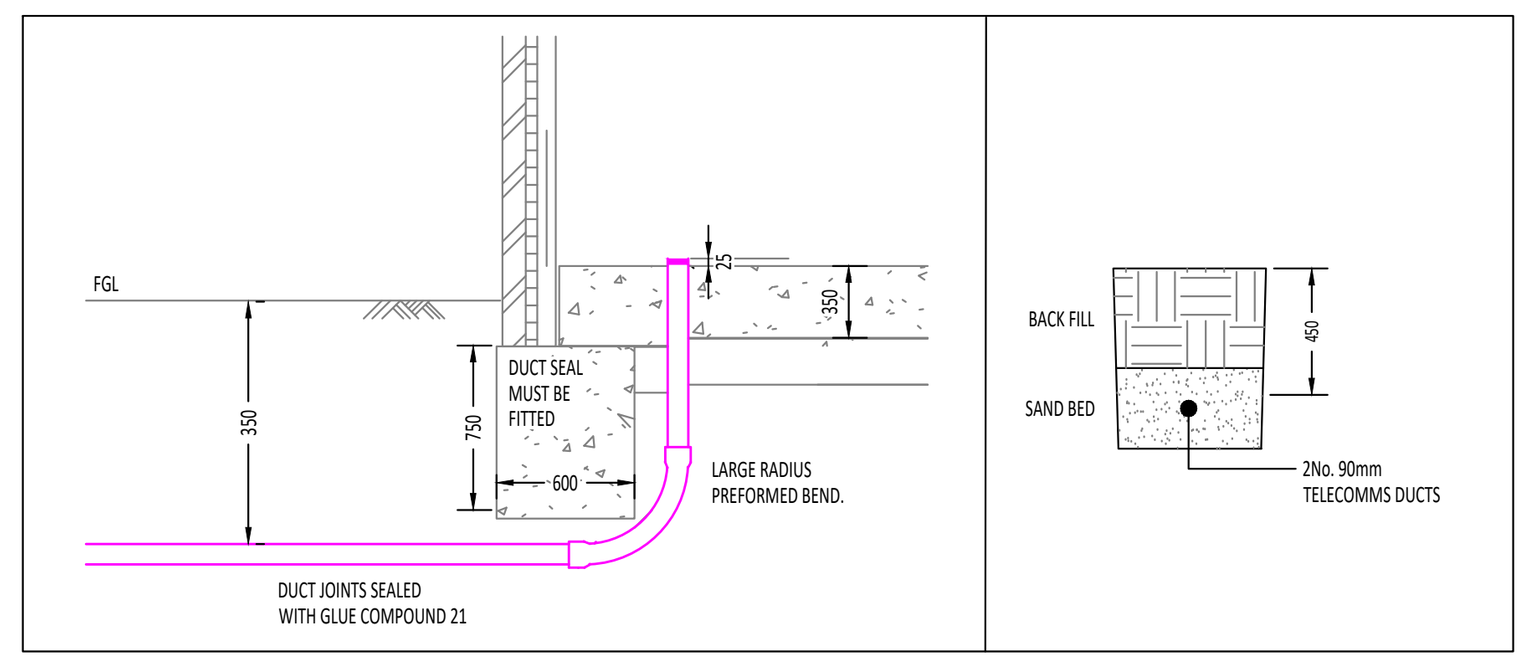


TYPICAL ELECTRICAL DUCT ENTRY DETAIL N.T.S

TYPICAL ELECTRICAL TRENCHING DETAIL



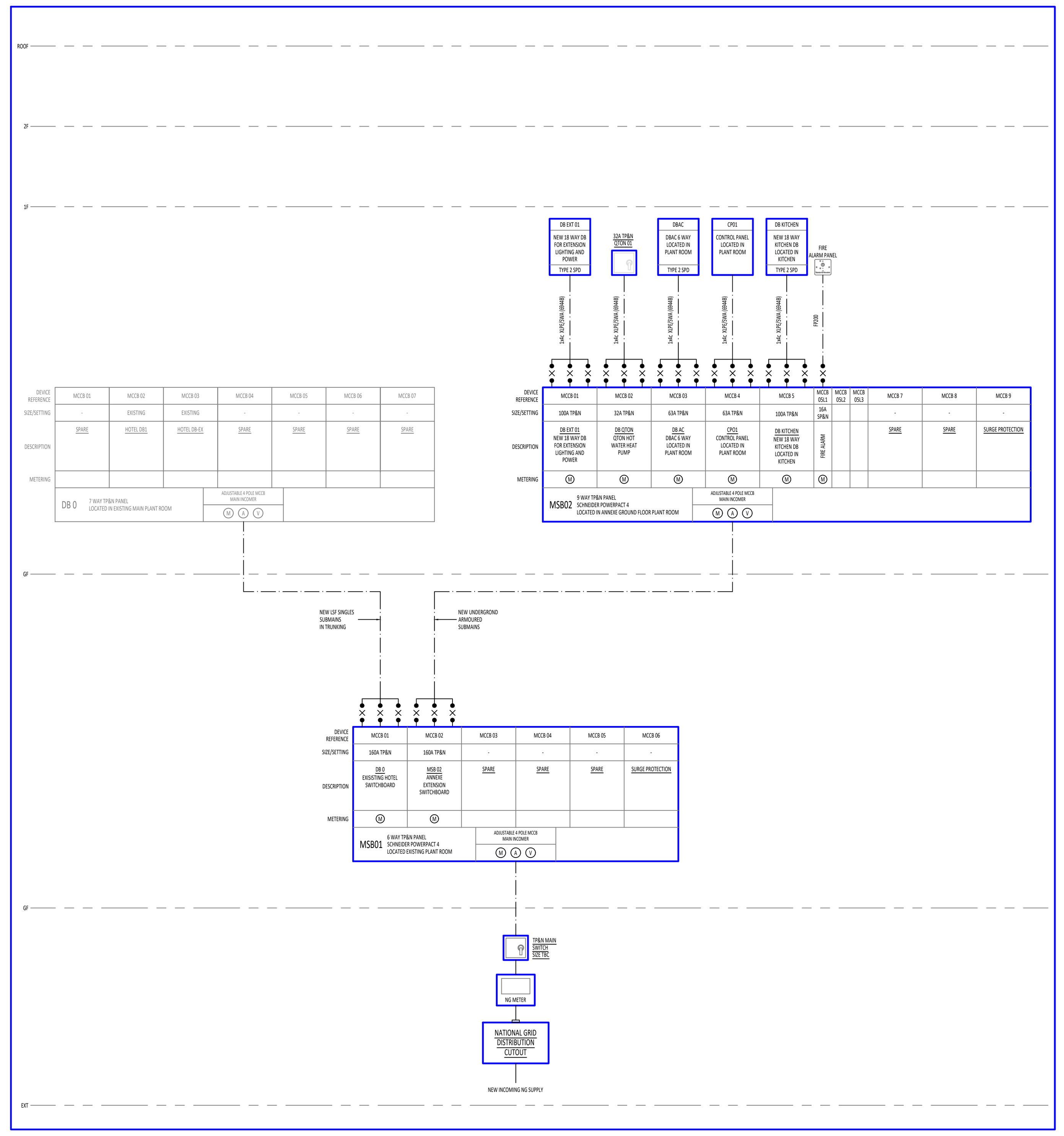
RECOMMENDED POSITIONING OF UTILITY APPARATUS N.T.S



TYPICAL TELEPHONE DUCT ENTRY DETAIL N.T.S

TELECOMMS DUCT TRENCHING DETAIL

BELOW GROUND SERVICE LEGEND	
SYMBOL	DESCRIPTION
(green dashed)	EXISTING UNDERGROUND HIGH VOLTAGE ELECTRICITY CABLE ROUTE. 650mm BELOW GROUND LEVEL.
— HV —	PROPOSED UNDERGROUND HIGH VOLTAGE ELECTRICITY CABLE ROUTE. 650mm BELOW GROUND LEVEL.
(red dashed)	EXISTING UNDERGROUND LOW VOLTAGE ELECTRICITY CABLE ROUTE. 450mm BELOW GROUND LEVEL.
— LV —	PROPOSED UNDERGROUND LOW VOLTAGE ELECTRICITY CABLE ROUTE. 450mm BELOW GROUND LEVEL.
(red long-short dashed)	EXISTING UNDERGROUND LV CABLE ROUTE FOR EXTERNAL LIGHTING COLUMNS.
— L —	PROPOSED UNDERGROUND LV CABLE ROUTE FOR EXTERNAL LIGHTING COLUMNS. ROUTE TBC BY ELECTRICAL CONTRACTOR.
(blue dashed)	EXISTING UNDERGROUND MAINS COLD WATER PIPE ROUTE. 750mm BELOW GROUND LEVEL.
— MCW —	PROPOSED UNDERGROUND MAINS COLD WATER PIPE ROUTE. 750mm BELOW GROUND LEVEL.
(yellow dashed)	EXISTING UNDERGROUND GAS PIPE ROUTE. 600mm BELOW GROUND LEVEL.
— GAS —	PROPOSED UNDERGROUND GAS PIPE ROUTE. 600mm BELOW GROUND LEVEL.
(purple dashed)	EXISTING UNDERGROUND COMMS ROUTE. 350mm BELOW GROUND LEVEL
— COMMS —	PROPOSED UNDERGROUND COMMS ROUTE. 350mm BELOW GROUND LEVEL
(grey dashed)	EXISTING UNDERGROUND BT ROUTE. 350mm BELOW GROUND LEVEL
— BT —	PROPOSED UNDERGROUND BT ROUTE. 350mm BELOW GROUND LEVEL
(brown dashed)	EXISTING UNDERGROUND CCTV CABLE ROUTE. 450mm BELOW GROUND LEVEL.
(cyan line)	UNKNOWN UNDERGROUND CABLE /PIPE.



DISTRIBUTION SCHEMATIC Scale N.T.S

INCOMING STAT CAPACITY INFORMATION (GAS)	
DETAILS	
MPRN Number	-
MSN Number	-
Meter Size (m3/hr)	-
Current Assigned Capacity (m3/hr)	- m3/hr
Estimated Future Max Capacity After Extension Added (m3/hr)	- m3/hr

INCOMING STAT CAPACITY INFORMATION (ELEC)	
DETAILS	
MPAN Number	-
MSN Number	-
Current Assigned Capacity (KVA)	- KVA
Max Demand (KVA)	- KVA
Estimated Future Max Capacity After Extension Added (KVA)	- KVA
Voltage Regulation Installed (EMS/Powerstar)	-

EXISTING SITE SERVICES RISK LEGEND	
SYMBOL	DESCRIPTION
RISK 1	RISK 1 - EXISTING SERVICES TO MAKE SAVE PRIOR TO STRIP OUT.

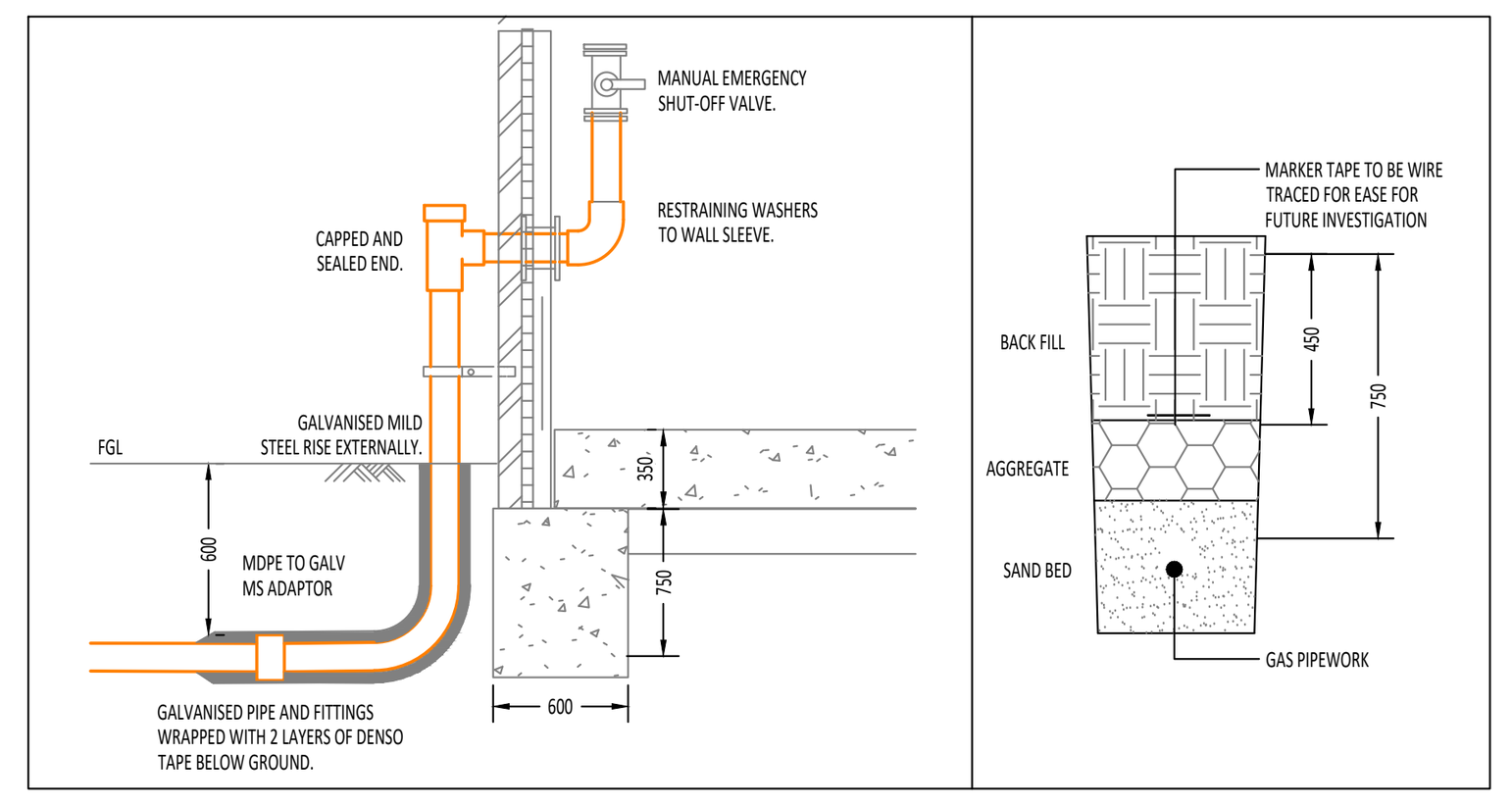
SERVICES OVERVIEW

STATUTORY DIVERSIONS/UPGRADES REQUIRED

1. GAS NO DIVERSION OR UPGRADE REQUIRED
2. WATER NO DIVERSION OR UPGRADE REQUIRED
3. ELEC NO DIVERSION OR UPGRADE REQUIRED
4. BT NO DIVERSION OR UPGRADE REQUIRED

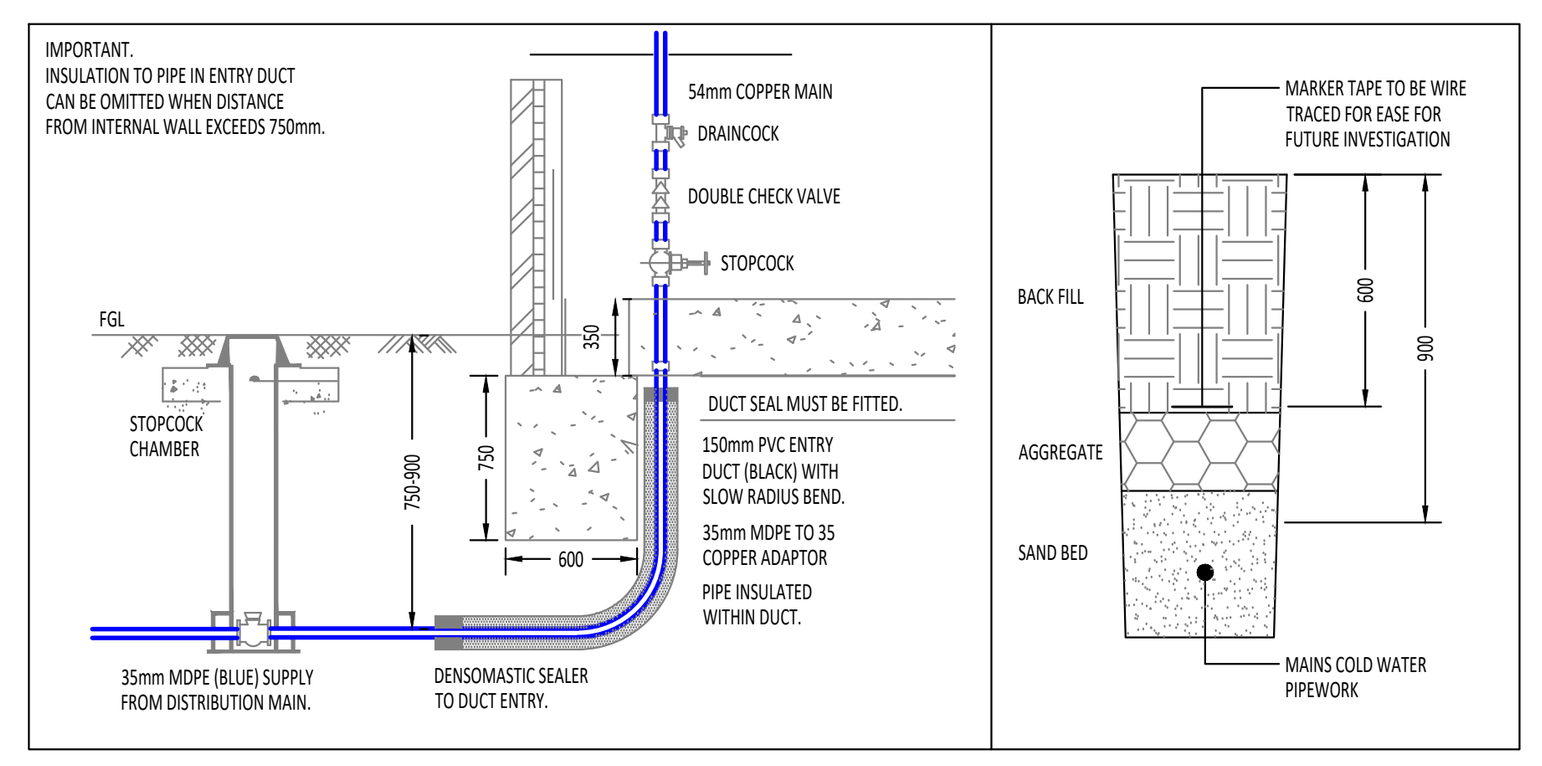
PRIVATE DIVERSIONS/UPGRADES REQUIRED

1. GAS NO DIVERSION OR UPGRADE REQUIRED
2. WATER NO DIVERSION OR UPGRADE REQUIRED
3. ELEC NO DIVERSION OR UPGRADE REQUIRED



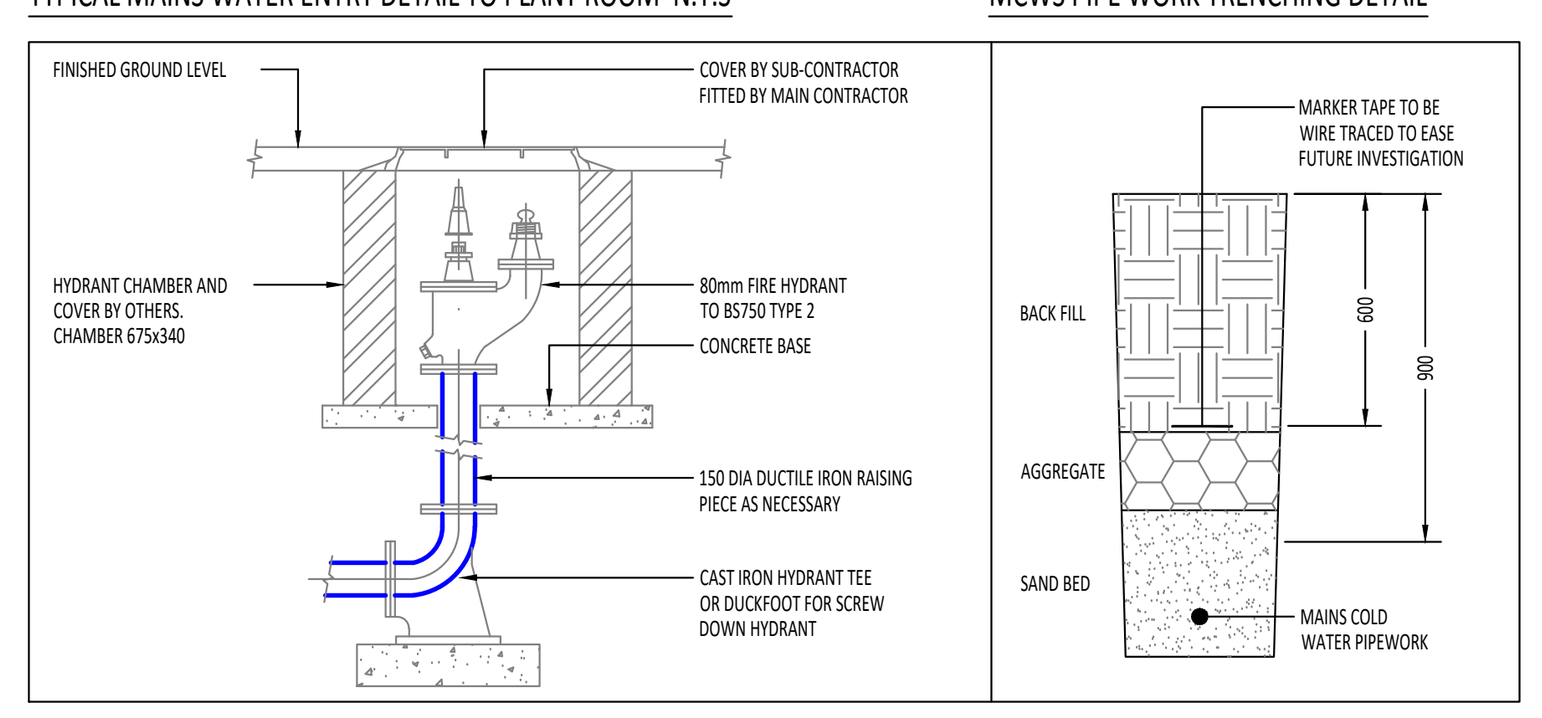
TYPICAL GAS ENTRY DETAIL TO PLANT ROOM N.T.S

GAS PIPE WORK TRENCHING DETAIL



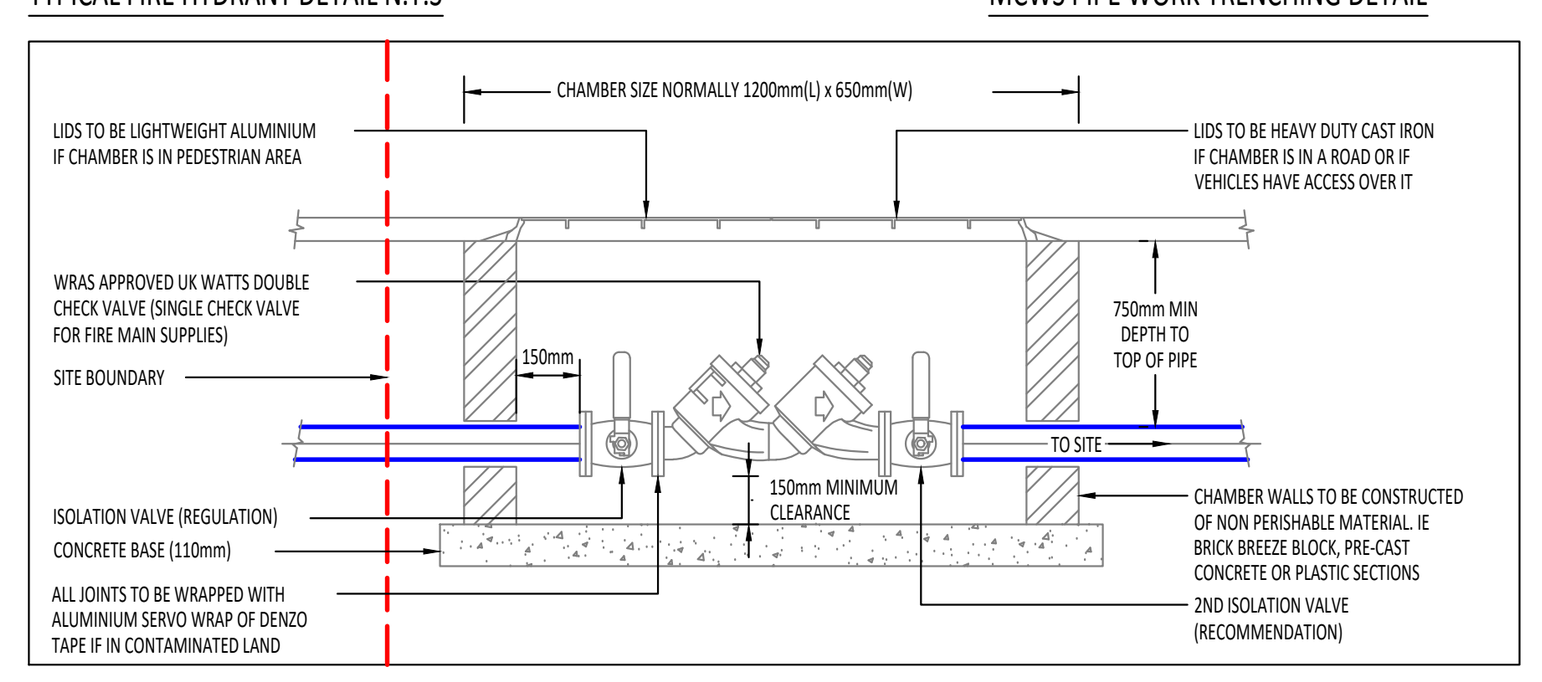
TYPICAL MAINS WATER ENTRY DETAIL TO PLANT ROOM N.T.S

MCWS PIPE WORK TRENCHING DETAIL



TYPICAL FIRE HYDRANT DETAIL N.T.S

MCWS PIPE WORK TRENCHING DETAIL



TYPICAL FIRE HYDRANT CHAMBER DETAIL N.T.S

EXTERNAL LIGHTING LEGEND

SYMBOL	DESCRIPTION	QUANTITY	REMOVED	MANUFACTURER
NEW LP	NEW LIGHTING COLUMN POSITION, EXISTING HEADS TO BE REUSED WHERE POSSIBLE.	-	-	EUROPEAN LAMP GROUP - 40W PROFESSIONAL LED FLOOD
EX LP	EXISTING LIGHTING COLUMN POSITION.	-	-	EXISTING
FL	NEW WALL MOUNTED FLOOD LIGHT	-	-	EUROPEAN LAMP GROUP - 40W PROFESSIONAL LED FLOOD
GL	NEW WALL MOUNTED GLOBE LIGHT POSITION.	-	-	FRANKLITE - EXT6591

EXTERNAL LIGHTING LEGEND

SYMBOL	DESCRIPTION	QUANTITY	REMOVED	MANUFACTURER
BL	NEW WALL MOUNTED BULKHEAD EYELID LIGHT	-	-	TAMLITE HURRICANE EYELID
BLEM	AS ABOVE WITH EMERGENCY BACK UP PACK	-	-	TAMLITE HURRICANE EYELID
DL	NEW RECEPTION CANOPY DOWNLIGHTS TO REPLACE EXISTING	-	-	AURORA - AUDL10019BW /40
EM	NEW OVER DOOR EMERGENCY BULKHEAD POSITION.	-	-	EATON AG BULKHEAD

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ALL DIMENSIONS ARE IN MILLIMETRES UNLESS STATED OTHERWISE AND MUST BE CHECKED ON SITE AND NOT SCALED FROM THIS DRAWING. THIS DRAWING IS TO BE READ IN ACCORDANCE WITH ALL RELEVANT SPECIFICATIONS AND ROOM DATA DOCUMENTS.

NOTES

THE GENERAL ELECTRICAL INSTALLATION WORK SPECIFICALLY HAS BEEN INSTALLED AND CONFORMS TO/COMPLIES WITH, THE FOLLOWING CURRENT STANDARDS, REGULATIONS AND ALL RECOMMENDATIONS COVERED UNDER BRITISH STANDARDS, UNLESS OTHERWISE DETAILED ELSEWHERE IN THIS SPECIFICATION:-

- THE REGULATIONS FOR ELECTRICAL INSTALLATIONS, LATEST EDITION, AS ISSUED BY THE INSTITUTION OF ENGINEERING AND TECHNOLOGY, (HEREINAFTER REFERRED TO AS THE IET 18TH EDITION WIRING REGULATIONS BS7671).
- THE REGULATIONS OF UK AND RELATED GOVERNING BODIES
- THE ELECTRICITY SAFETY, QUALITY & CONTINUITY REGULATIONS 2002.
- THE ELECTRICITY SUPPLY AUTHORITY GENERAL AND LOCAL REQUIREMENTS.
- ALL RELEVANT BRITISH STANDARD SPECIFICATIONS AND CODES OF PRACTICE.
- LOCAL FIRE OFFICERS REQUIREMENTS.
- THE FIRE PRECAUTIONS (WORKPLACE) REGULATIONS 1997.
- THE ELECTRICITY SUPPLY AUTHORITY GENERAL AND LOCAL REQUIREMENTS.
- DISABILITY & DISCRIMINATION ACT (DDA)
- BS5266-1 2016 EMERGENCY LIGHTING
- PART L2B - EXISTING NON DWELLING 2016
- ALL SUBSEQUENT AMENDMENTS TO THE ABOVE.

GENERAL

ALL ON-SITE TRENCHES SHALL BE EXCAVATED AND BACKFILLED WITH CLEAN MATERIAL BY THE GROUNDWORKS CONTRACTOR TO THE SATISFACTION OF THE C.A.

TRENCHES SHALL BE EXCAVATED TO ALLOW FOR A SAND BED LAYER OF 50MM THICKNESS UNLESS OTHERWISE INDICATED.

WHERE DUCTS ARE WITHIN BUILDING STRUCTURE OR BELOW HIGHWAYS ETC. THE DEPTH AND LOCATION SHALL BE CONFIRMED BY THE STRUCTURAL ENGINEER REGARDING CONSTRUCTION SUITABILITY.

ALL SERVICES BELOW HIGHWAYS OR CONCRETE HARD STANDING SHALL BE INSTALLED WITHIN TWIN WALLED RIGIDUCTS
ALL INFORMATION ILLUSTRATED ON THIS DRAWING IS INDICATIVE & THE CONTRACTOR SHALL ENSURE THAT EXISTING SITE SERVICES ARE LOCATED BY C.A.T. SCAN OR OTHER METHODS AS APPROPRIATE, SO AS TO ENABLE ANY LIVE SUPPLY SERVING ADJACENT PROPERTIES TO BE MAINTAINED.

ALL NECESSARY TRIAL HOLES EXCAVATED TO LOCATE PRIVATE SITE SERVICES SHALL BE DUG BY HAND AND THE RESULTS RECORDED ON EXISTING SITE SERVICES DRAWING.

WHERE EXCAVATING IN THE VICINITY OF LIVE SITE SERVICES APPROPRIATE HEALTH & SAFETY REQUIREMENTS SHALL BE APPLIED AT ALL TIMES.

WHERE EXCAVATING CLOSE TO STATUTORY AUTHORITY SUPPLIES THE AUTHORITIES HEALTH & SAFETY REQUIREMENTS SHALL BE APPLIED.

THIS DRAWING SHALL BE READ IN CONJUNCTION WITH STATUTORY AUTHORITY DRAWINGS.

THE CONTRACTOR SHALL ASCERTAIN THE LOCATION OF ALL EXISTING SERVICES PRIOR TO THE COMMENCEMENT OF ANY EXCAVATION WORK.

WATER SERVICES

ALL BURIED WATER SERVICES SHALL BE INSTALLED USING 'BLUE' MEDIUM DENSITY POLYETHYLENE PIPES (MDPE) TO BS 6572 LAID WITH A MINIMUM COVER OF 900mm & METAL TRACE MARKER TAPE TO B E INSTALLED OVER THE FULL LENGTH OF PIPEWORK RUN (IDENTIFIABLE FROM GROUND LEVEL). THE ON-SITE MAINS SHALL BE SUBJECTED TO A PRESSURE TEST OF 10 BAR PRIOR TO BACKFILLING COMMENCING AND SHALL BE WITNESSED BY THE C.A. A FINAL TEST SHALL BE CARRIED OUT ON COMPLETION. A CHLORINATION INJECTION TEE SHALL BE PROVIDED ON THE WATER MAINS AT THE CONNECTION POINT TO THE SUPPLY PIPE. CHLORINATION WILL BE THE RESPONSIBILITY OF THE CONTRACTOR.

ELECTRICAL SERVICES

ALL NEW ELECTRICAL DUCTS SHALL BE RIGIDUCT TYPE COMPLETE WITH EASYSWEEP BENDS
ALL NEW ELECTRICAL DUCTS SHALL BE PROVIDED A MINIMUM 2xNo. DRAW CORDS

TLP LAYOUTS FOR TENDER PURPOSES ONLY
CONSTRUCTION DRAWINGS TO BE PROVIDED
BY THE M&E CONTRACTOR ONCE ON SITE.

THIS DRAWING IS PRODUCED IN ACCORDANCE WITH ARCHITECTS/MAIN CONTRACTORS DRAWING REFERENCE

\PI1077 AL8 PROPOSED SITE PLAN

REV	DESCRIPTION	DRN	CHK	DATE
T1	STAGE 4 ISSUE	JW	MT	XX.XX.XX

STAGE 4

Client
Whitbread PLC
Whitbread Court
Houghton Hall Business Park
Porz Avenue
Dunstable
LU5 5XE

Architect
Allison Pike Architects
7 Buxton Road West,
Disley, Stockport,
Cheshire, SK12 2AE
Tel: 01663 763000
www.allisonpike.com

Thornley & Lumb
Building Services Consultant Engineers
Head Office:
Century House, 257 Cutler Heights Lane
Bradford, West Yorkshire, BD4 9JG
Telephone: +44(0)12 7468 7755
Southern Office:
2nd Floor, 216 Tower Bridge Road
London, WC2N 6AA
Telephone: +44(0)20 7520 9355
www.thornleylumb.co.uk info@thornleylumb.co.uk

Project Number: C8804
Project Name: PI Manchester W Didsbury
Christie Fields Business Pk, Derwent Avenue, M21 7QS

Drawing Title
Proposed Site Plan
Mechanical & Electrical Site Services Layout

Engineer	Checked by	Drawn By
DS	MT	JW

Date	Scale	Size
04.04.25	1:250	A1

Drawing Number

Project	Originator	Volume	Level	Type	Role	Number	Revision
C8804 -	TLP -	00 -	XX -	DR -	E -	902	T1

Mark Newton

From: Alan Isherwood <Alan.I@booth-king.co.uk>
Sent: 27 October 2026 11:34
To: Mark Newton
Subject: FW: [8804] Manchester West Didsbury
Attachments: GPS_PE_Protecta_Line_Instal.pdf; C8804-TLP-00-00-DR-ME-901 Existing M&E Site Services.pdf; C8804-TLP-00-00-DR-ME-902 Proposed M&E Site Services.pdf

Can you let me know if this is sufficient?

Alan Isherwood Director BSc PgDip CEng MIStructE

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PLEASE CONSIDER THE ENVIRONMENT BEFORE PRINTING THIS E-MAIL.

From: Des Simpkin <des.simpkin@thornleylumb.co.uk>
Sent: 27 October 2026 11:24
To: Alan Isherwood <Alan.I@booth-king.co.uk>
Subject: [8804] Manchester West Didsbury

Alan

Within our specification we insist all pipework is as below.

The original 63mm service was Protectaline, a **private** diversion was made, withdrawing the pipework from the building with a new section connected from existing supply to the new plant room.
Please see below snip from the Specification for the project and the attached drawings complete with product information / technical guidelines.

Water – MDPE	Blue GPS **Protectaline** MDPE Barrier Pipe to BS EN 1 (25mm - 355mm - core pipes) shall be installed Pipe shall have a pressure rating of 12.5 BAR upto 63r 10 BAR for HDPE 90mm to 180mm. Water Standards: ISO 4427:2007, BS EN 15494:2003 BS 6572:1985

Regards

Des Simpkin
Senior MEP Project Manager
Thornley & Lumb Partnership Ltd

+44 1274 687 755
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des.simpkin@thornleylumb.co.uk
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GP-PT003/2

TECHNICAL

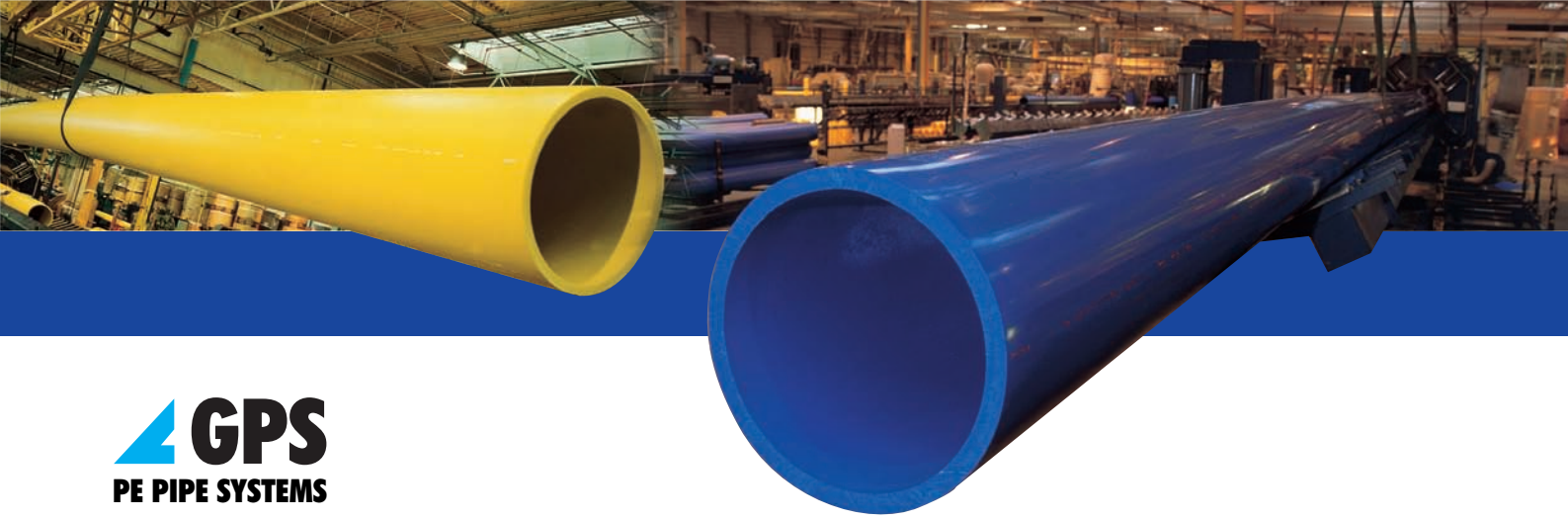
PROTECTA-LINE

BARRIER PIPE AND FITTINGS SYSTEMS

For complete peace of mind



Installation and Technical Guidelines



GPS
PE PIPE SYSTEMS

Our Company

GPS PE Pipe Systems is a member of the international Aliaxis Group of Companies who manufacture and sell pipe systems and related products for residential and commercial construction, industrial and public utilities.

We specialise in the research, development and manufacture of polyethylene and multi-layer pipe systems including fittings for gas and water transportation in the utilities, offshore and industrial markets.

Resulting from the amalgamation of two market leading companies, GPS PE Pipe Systems brings together over one hundred years of experience and knowledge in plastic pipe systemss.

The Environment

We actively and consistently strive to reduce our impact on the environment. We have measured our performance against various environmental indicators since 1997 and operated an environmental management system accredited to ISO 14001 since 1999. We are currently working towards an independent verification of our carbon footprint under the Certified Emissions Measurement And Reduction Scheme (CEMARS).

Market Oriented

GPS PE Pipe Systems products have a broad range of applications in the industrial and utilities markets on a worldwide basis. The utilities of water and gas distribution are important sectors for high integrity products where the maintenance of water quality and the safe transport of gaseous fuels are of paramount importance. Industrial applications include: alternative energy installations in landfill gas systems; effluent transportation and mineral slurries.

Many of the brands in the GPS portfolio have a long record of innovation in meeting the needs of the water and gas utilities. One of the foremost pioneers in polyethylene pipe systems, GPS is continually improving and updating its offering to meet the ever growing needs of the distribution engineer, ensuring they stay at the forefront of world gas and water distribution/treatment systems.

Manufactured in the UK, our products are sold to more than 60 countries worldwide.

Customer Focus

The key to our success lies in the commitment we pledge to provide the highest quality service and support to our customers and industry end-users. We are a team of highly motivated and experienced individuals who are dedicated to helping our customers achieve their goals.

We place the utmost importance in meeting the needs of our customers, constantly evolving our extensive product portfolio to meet the ever changing demands of the water and gas utilities, industrial and offshore markets.

Quality

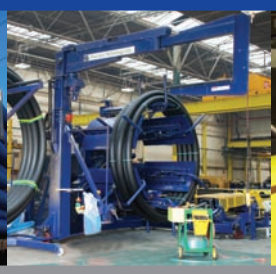
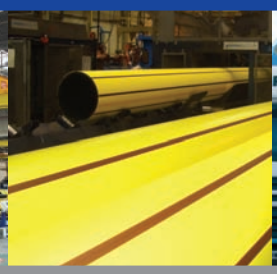
Designed, manufactured and supplied under a BS EN ISO 9001:2008 accredited Quality Management System, GPS products comply with relevant national, European and international product standards to ensure peace of mind for our customers.

Certificate No. FM 34819

Certificate No. E 51385

Business in the Community AWARDS 2010





World leaders in the design, manufacture, marketing and sales of high performance, high integrity plastic and composite piping systems.

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Introduction

Previously used contaminated land is increasingly being reused for new developments where drinking water is needed. Such land, in particular former industrial land, must either be remediated to reduce contamination to acceptable levels, or a pipe system must be installed which can guarantee the long term safety and quality of the water supply. Without remediation, conventional metal and polyethylene (PE) piping systems are not recommended in such land as certain residual chemicals can permeate or corrode the pipe wall causing unpleasant tastes and shortening the life of the pipe. For further details refer to the WRc Polyethylene Pipe Systems Manual - version 01/02 - Ref: ED11 and UKWIR 10/MW/03/21.

The fully integrated barrier pipe and fittings system for safely transporting water through contaminated land

Protecta-Line is an award winning fully integrated barrier pipe and fittings system in sizes from 25mm to 355mm. The five-layer pipe comprises: an internal standard PE host pipe for carrying the water; an aluminium barrier layer to stop the ingress of contaminants; an outer polyethylene protection layer; and two adhesive tie-layers.

Protecta-Line prevents the tainting that can be caused by through-wall permeation by hydrocarbons and related chemicals that might be present in contaminated land. Introduced in 1996 to the UK market, Protecta-Line won the IWEX Innovation Award in 1997. Due to its structure any chemicals left in the land cannot damage the pipe wall, ensuring preservation of long-term strength, many years of usage and whole-life cost savings. The double bonded construction incorporates an impermeable metallic barrier wrapped onto a standard central core of PE80 or PE100 (Excel) pipe conforming to BS 6572 or WIS 4-32-17/BS EN 12201.

The Protecta-Line Advantages

- WRAS and Regulation 31/27 approval for total peace of mind to the highest standards of safety demanded by water companies and other installers.
- The whole Protecta-Line system is Kitemarked to WIS 4-32-19, the only industry standard for pipe systems for potable water in contaminated land.
- Protecta-Line has all the installation benefits of conventional PE pipe - a lightweight, flexible material that is fast and easy to install.
- Protecta-Line system encompasses the most complete and fully integrated range of compatible pipe and fittings, approved for safe transportation of drinking water through contaminated land.
- Protecta-Line allows for a lower cost of installation than metallic pipe and is significantly less disruptive.
- Protecta-Line pipes may be subjected to cold bending as for standard polyethylene pipes (see GPS Installation & Technical Guidelines Brochure - GP-IT005).

Approvals

- Approved by the Secretary of State
- WRAS **(complete system approved)**
- BS 6572 (25mm - 63mm pipes)
- WIS 4-32-17 (25mm - 355mm pipes)
- BS EN 12201 (90mm - 355mm pipes)
- WIS 4-32-19 **(complete system is Kitemarked)**. System permeation tests independently verified

Protecta-Line is an approved system. Only Protecta-Line fittings shall be used with Protecta-Line pipe. The use of alternative fittings will have the following effects on your Protecta-Line system:



- Invalidation of WRAS approval and manufacturers system performance warranty.
- Compromised permeation resistance (causing non-compliance with WIS 4-32-19 and possible risks to health).
- Danger of pipe-layer delamination, compromising system performance integrity and risking pipe bursts. It would be illegal to install non-WRAS approved fittings.

WRAS
0609132
0702502
0902519
0902515
0703510

07472
56151
508224

WIS 4-32-19
KM 514626

The most complete system

The Protecta-Line range consists of:

- Protecta-Line Pipe from 25mm to 110mm in SDR11 and 125mm to 355mm in SDR17. Available in 6m and 12m sticks; 25m, 50m and 100m coils, depending on diameter.
- Protecta-Line Mechanical Compression Fittings from 25mm to 63mm including Couplers, Reducing Couplers, Transition Fittings, Equal Tees, 90º Elbows, End Connectors and Reducing Sets.
- Protecta-Line Stop Cocks at 25mm & 32mm.
- Protecta-Line Self-Tapping Ferrule Off-Takes in mains sizes 63mm to 355mm with 25mm or 32mm outlets.
- Protecta-Line Ferrule Off-Takes in mains sizes 90mm to 355m with 63mm outlets.
- Protecta-Line Ductile Iron Ferrule in 3/4" x 25mm.
- Protecta-Line Fluid Compression Fittings from 63mm to 180mm including Couplers, Reducers, 90º Elbows, 45º Elbows, Equal Tees, Flanged Branch Tees, Repair Couplers, Stub Flange Adaptors and Duck Foot Bends.
- Protecta-Line Electrofusion Fittings from 90mm to 355mm including Couplers, Reducers, 90º Elbows, 45º Elbows, Equal Tees, Flanged Branch Tees and Flange Adaptors.
- A range of fabricated fittings for butt-fusion in sizes from 90mm to 355m, without need to wrap in the field.

Sizes 90mm to 355mm of Protecta-Line can be joined using Electrofusion or Butt-fusion. When made in accordance with GPS PE Pipe Systems' recommended procedures, butt-fusion and electrofusion joints of the Protecta-Line system have been independently shown to meet the requirements of WIS 4-32-19 without any need for subsequent wrapping. This does not exempt installers from local regulations and the local Water Company preferences must be adhered to.

Protecta-Line systems should be pressure tested after installation using the standard industry procedures employed for PE pipelines, taking extra care when working in a contaminated environment as set out by the Local Water Undertaking.

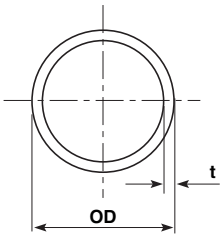
View Protecta-Line installation videos online.
Use your mobile to scan this code.

Tel: +44 (0)1480 52121 **Fax:** +44 (0)1480 458829 **Technical Support:** +44 (0)1480 442620

Protecta-Line Pipe

- Kitemarked to WIS 4-32-19.
- Standard blue PE100 (Excel) or PE80 (MDPE) core pipe with aluminium barrier layer and protective outer PE skin.
- In 6m and 12m sticks and 25m, 50m or 100m coils.
- For use with Protecta-Line mechanical compression fittings up to 63mm and fluid compression fittings from 63mm up to 180mm.
- Suitable for butt-fusion or electrofusion jointing where specified, in sizes 90mm and above.
- Brown stripes provide easy identification and comply with NJUG regulations.





Straight Lengths

Size* (mm)	Std Length (m)	Material	Pressure Rating (bar)	SDR	Min OD (mm)	Max OD (mm)	Mean Bore (mm)	Min Wall Thickness (mm)	Max Wall Thickness (mm)	Mean Weight (kg/m)	6M Code	12M Code
63	6	PE80 (MDPE)	12.5	11	64.3	65.6	51	6.5	7.6	1.3	44 512 311	-
90	6/12	PE100 (Excel)	16	11	92.2	93.5	73	9.3	10.7	2.6	44 512 313	44 527 313
110	6/12	PE100 (Excel)	16	11	112.2	113.5	89	11.1	12.7	3.7	44 512 314	44 527 314
125	6/12	PE100 (Excel)	16	11	127.2	128.5	101.2	12.5	14.2	4.7	44 512 315	44 652 315
	6/12	PE100 (Excel)	10	17	127.2	128.5	110	8.5	9.8	3.4	44 653 315	44 654 315
160	6/12	PE100 (Excel)	10	17	163.2	165.1	140	10.7	12.4	5.4	44 653 317	44 654 317
180	6/12	PE100 (Excel)	16	11	183.3	185.4	146.8	17.6	20	9.5	44 512 318	44 652 318
	6/12	PE100 (Excel)	10	17	183.3	185.4	158	11.9	13.7	6.8	44 653 318	44 654 318
225	6/12	PE100 (Excel)	10	17	227.3	229.8	197	14.6	16.6	10.2	44 653 320	44 654 320
250	6/12	PE100 (Excel)	10	17	252.3	254.9	220	16	18.3	12.4	44 653 321	44 654 321
280	6/12	PE100 (Excel)	10	17	282.3	285.1	246	17.8	20.1	15.3	44 653 322	44 654 322
315	6/12	PE100 (Excel)	10	17	317.3	320.2	277	19.9	22.4	19.2	44 653 323	44 654 323
355	6/12	PE100 (Excel)	10	17	357.3	360.6	312	22.3	25.1	24.2	44 653 324	44 654 324

Coils

Size* (mm)	Coil Lengths Available (m)	Material	Pressure Rating (bar)	SDR	Min OD (mm)	Max OD (mm)	Mean Bore (mm)	Min Wall Thickness (mm)	Max Wall Thickness (mm)	Approx Weight (kg/m)	Code
25	25/50	PE80 (MDPE)	12.5	11	26.3	27.5	20	3.0	3.7	0.26	44 658 308/44 659 308
32	25/50	PE80 (MDPE)	12.5	11	33.3	34.5	26	3.7	4.4	0.39	44 658 308/44 659 308
63	25/50/100	PE80 (MDPE)	12.5	11	64.3	65.6	51	6.5	7.6	1.3	44 658 311/44 659 311/44 660 311
90	50/100	PE100 (Excel)	16	11	92.2	93.5	73	9.3	10.7	2.6	44 659 313/44 660 313
110	50/100	PE100 (Excel)	16	11	112.2	113.5	89	11.1	12.7	3.7	44 659 314/44 660 314
125	50/100	PE100 (Excel)	16	11	127.2	128.5	101.2	12.5	14.2	4.7	44 659 315/44 660 315
	50/100	PE100 (Excel)	10	17	127.2	128.5	110	8.5	9.8	3.4	44 655 315/44 656 315
160	50/100	PE100 (Excel)	10	17	163.2	165.1	141	10.7	12.4	5.4	44 655 317/44 656 317
180	50/100	PE100 (Excel)	16	11	183.3	185.4	146.8	17.6	20	9.5	44 659 318/44 660 318
	50/100	PE100 (Excel)	10	17	183.3	185.4	158	11.9	13.7	6.8	44 655 318/44 656 318

* The nominal size is the nominal core pipe outside diameter.

Other lengths and SDRs may be available to order subject to a minimum order value. Please contact our Sales Office for further information.

To connect Protecta-Line to alternative barrier pipe systems, a mechanical connection should be used: either a threaded connection in the case of the service pipe sizes or a flange connection in the case of larger sizes. Contact our Technical Support for further details.

Testing and Commissioning

The sequence of events for Protecta-Line includes the same basic testing procedures as for conventional PE pipes, but taking extra care appropriate for a contaminated environment as set out by the Local Water Undertaking.

As for normal PE pipes these procedures will normally require, as a minimum, the adequate flushing of the services and the testing of all pipes and joints to the maximum head to which the system is to be subjected.

Only Protecta-Line fittings shall be used with Protecta-Line pipe. The use of alternative fittings will have the following effects on your Protecta-Line system:
- Invalidation of WRAS approval and manufacturers system performance warranty.
- Compromised permeation resistance (causing non-compliance with WIS 4-32-19 and possible risks to health).
- Danger of pipe-layer delamination, compromising system performance integrity and risking pipe bursts.
- It would be illegal to install non-WRAS approved fittings.

Protecta-Line Mechanical Compression Fittings

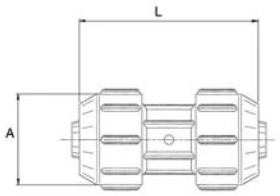
Protecta-Line Mechanical Compression Fittings are supplied for use with pipe sizes between 25mm and 63mm.

These acetal fittings are WRAS approved fittings for use with 25mm to 63mm Protecta-Line pipe as they are proven to WIS 4-32-19 to offer barrier protection against contaminants. They also carry a unique pipe insert to totally seal against the pipe bore ensuring there can be no contact between the drinking water and the pipe's aluminium layer.

- Proven barrier protection against contamination.
- No pipe end preparation required.
- No wrapping required.
- No risk of joint corrosion.
- No contact between the pipe's protective aluminium layer and drinking water.
- Easy and rapid installation.
- No specialist equipment required.
- All weather installation.
- Employs O-ring seal, in body of fitting only.
- Suitable for connecting Protecta-Line to a standard PE pipe.

PE to PE Couplers

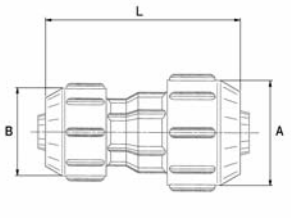




Size (mm)	A (mm)	L (mm)	Weight (kg)	Code
25 x 25	51	93	0.12	44 100 307
32 x 32	60	99	0.19	44 100 308
63 x 63	105	155	0.70	44 100 311

PE to PE Reducing Couplers

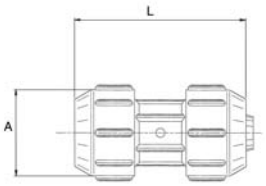




Size (mm)	A (mm)	B (mm)	L (mm)	Weight (kg)	Code
32 x 25	60	51	100	0.15	44 114 409
63 x 25	105	81	155	0.58	44 114 412
63 x 32	105	105	155	0.78	44 114 415

PE to Copper Coupler





Size (mm)	A (mm)	L (mm)	Weight (kg)	Code
25 x 15	51	93	0.12	44 996 005
25 x 22	51	93	0.13	44 996 006
32 x 28	60	93	0.21	44 996 007

Fittings for Protecta-Line in Brownfield and Contaminated Land

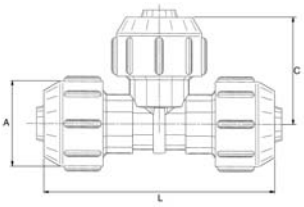
Protecta-Line Pipe Sizes (mm)													
25	32	63	90	110	125	160	180	225	250	280	315	355
Mechanical Compression Fittings													
			Fluid Compression Fittings										
			25mm and 32mm Self-Tapping Ferrule Off-Takes										
			63mm Ferrule Off-Takes										
			Electrofusion or Butt-Fusion										

A range of fabricated fittings for butt-fusion in sizes 90mm to 355mm is available to order – please contact Sales Office for further information.

Tel: +44 (0)1480 52121 **Fax:** +44 (0)1480 458829 **Technical Support:** +44 (0)1480 442620

Equal Tees

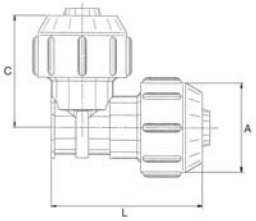




Size (mm)	A (mm)	C (mm)	L (mm)	Weight (kg)	Code
25 x 25	51	64	134	0.18	44 122 307
32 x 32	60	68	146	0.30	44 122 308
63 x 63	105	100	216	1.25	44 122 311

90º Elbows

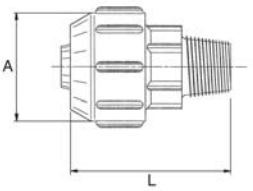




Size (mm)	A (mm)	C (mm)	L (mm)	Weight (kg)	Code
25	51	68	93	0.13	44 115 307
32	60	71	97	0.22	44 115 308
63	105	105	158	0.90	44 115 311

End Connectors - PE x Male Iron BSP Tapered

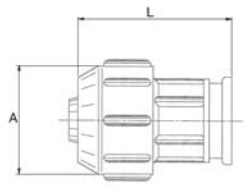




Size (mm x inch)	A (mm)	L (mm)	Weight (kg)	Code
25 x ¾	51	64	0.07	44 151 608
32 x ¾	60	74	0.08	44 151 611
32 x 1	60	77	0.11	44 151 612
63 x 1½	105	100	0.39	44 151 628
63 x 2	105	105	0.39	44 151 629

End Connectors - PE x Female Iron BSP Tapered

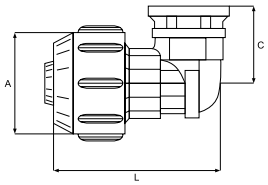




Size (mm x inch)	A (mm)	L (mm)	Weight (kg)	Code
25 x ¾	51	67	0.08	44 101 608
32 x 1	60	75	0.12	44 101 612
63 x 2	105	100	0.43	44 101 629

90º Elbows - PE x Female Iron BSP Tapered

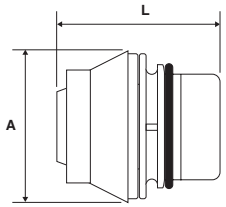




Size (mm x inch)	A (mm)	C (mm)	L (mm)	Weight (kg)	Code
25 x ¾	51	35	73	0.08	44 396 608
32 x ¾	60	39	80	0.18	44 396 612
63 x 2	105	62	145	0.57	44 396 629

Reducing Sets - to allow easy Protecta-Line diameter changes

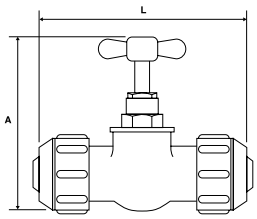




Size (mm)	A (mm)	L (mm)	Weight (kg)	Code
32 x 25	44	42	0.03	44 105 409
63 x 32	80	51	0.15	44 105 415

Stop Cocks - BS 5433 Type



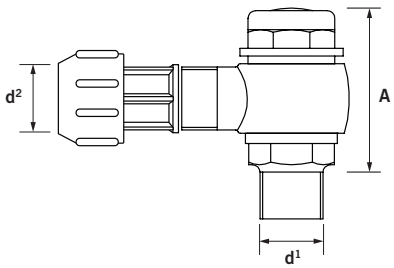


Size (mm)	A (mm)	L (mm)	Weight (kg)	Code
25*	140	135	0.9	44 142 307
32**	165	170	1.7	44 142 308

* Now includes 22mm copper Type A insert
** Now includes 28mm copper Type A insert

Ductile Iron Ferrule - PE x Male Iron BSP Tapered



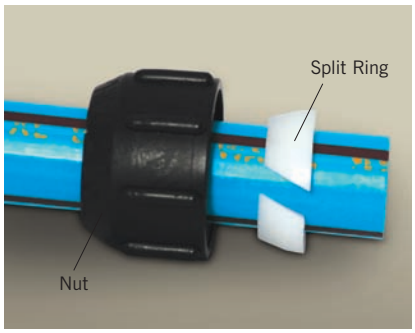


Size (inch x mm) d¹ x d²	A (mm)	Weight (kg)	Code
¾ x 25	60	0.45	44 762 407

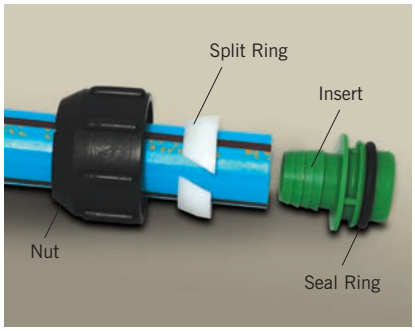
Tel: +44 (0)1480 52121 Fax: +44 (0)1480 458829 Technical Support: +44 (0)1480 442620

Jointing Instructions for 25mm-63mm Protecta-Line Mechanical Compression Fittings (Service Pipes)

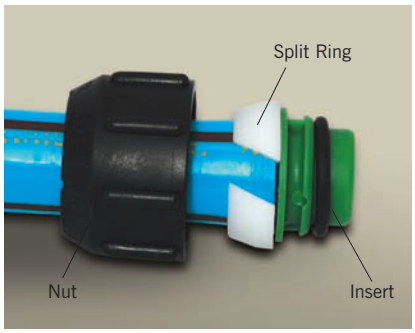
For use on GPS Protecta-Line pipe only.



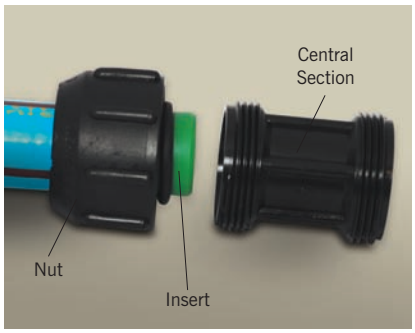
1. Cut the pipe square. Unscrew the Protecta-Line fitting and remove the nut and white split ring. Slide these on to the Protecta-Line pipe, nut first ensuring that the taper of the split ring faces towards the nut.



2. Tap the insert into the end of the Protecta-Line pipe with a flat wooden object. Ensure that the seal ring is correctly positioned on the pipe insert.

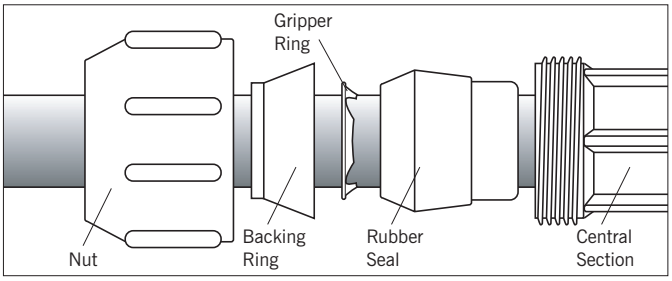


3. Slide the split ring along the Protecta-Line pipe until it is up against the insert. Snap the nut over the split ring.



4. Offer the body of the fitting to the Protecta-Line pipe end and screw the nut on to the fitting body. Continue to tighten the nut until the thread on the body is no longer visible.

Protecta-Line to copper joint (incorporates insert set for Copper Type A for above ground use on Table X tube).



1. Cut copper pipe square, preferably with cutters, and deburr.
2. Degrease pipe and roughen with wire wool or similar.
3. Unscrew nut from copper side of Protecta-Line fitting and slide this nut and plastic backing ring along copper pipe – with taper of backing ring towards nut.
4. Then slide metal gripper ring on to pipe and position it 10–15mm from end, ensuring flat face of gripper ring is facing towards backing ring/nut (i.e. slots in the gripper ring must face towards fitting body).
5. Next slide rubber seal on to copper pipe all the way up to internal stop - taper facing towards other parts already on pipe.
6. This will make certain that the metal gripper ring is pushed to correct location along pipe.
7. Slide backing ring forward to meet gripper ring/rubber seal.
8. Push assembly into body of Protecta-Line fitting and engage nut.
9. Tighten nut firmly with a wrench.
10. Ensure all pipework is securely anchored to counteract end loading.

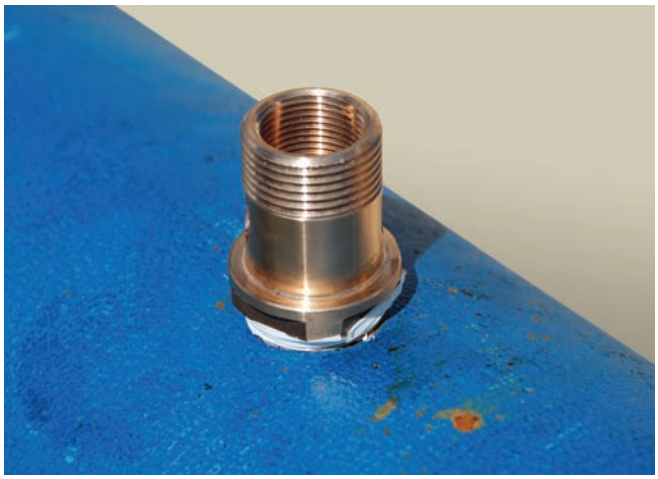
Caution: Do not use heat near plastics and do not re-use gripper ring.

Connecting Protecta-Line mechanical compression fittings to iron fittings
When screwing Protecta-Line Mechanical Compression Fittings onto iron fittings it is important not to use excessive amounts of **thread** sealing tape or other material **because** this can result in unreasonable force needed to complete the joint. Thread sealing tape should be WRc approved.

Installation Instructions for Protecta-Line Ductile Iron Ferrule

1. Drill and tap the ductile iron main and insert the ferrule nipple in the usual way.





2. Fit the Protecta-Line end connector compression fitting to the outlet of the ferrule banjo, employing sufficient PTFE tape to ensure a good seal. Fit the Protecta-Line service pipe into the compression fitting on the outlet as described on page 7.



3. Fit the banjo onto the ferrule nipple and replace the securing collar. After aligning the outlet to the desired position, tighten the securing collar.



4. Remove the plug from the top of the securing collar and withdraw the nipple plug all the way up to the top of the stem to achieve a good seal and then replace the plug.





5. Reinstate any protective wrappings to the ductile iron pipe.

Note: The ductile iron ferrule may have a gunmetal rather than an acetal top cap on some fittings.

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Protecta-Line Ferrule Off-Takes

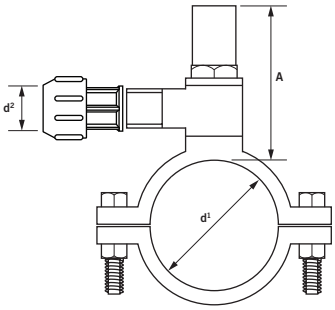
- 25mm and 32mm Protecta-Line self-tapping ferrule off-take for 63mm to 355mm Protecta-Line mains.
- 63mm Protecta-Line ferrule off-take for 90mm to 355mm Protecta-Line mains.
- Each ferrule off-take incroporates a self-locking insert sleeve that grips into drilled/tapped hole in the mains pipe and securely seals the pipe crown to the underside of the fittings base.
- The insert sleeve features a captive seal that positively isolates the barrier pipe aluminium layer from the drinking water.
- Ground contaminants and pipe aluminium barrier layer are isolated from water supply.
- Simple all weather installation and use.

Note: Protecta-Line gunmetal ferrule off-takes should always be used in preference to PE electrofusion saddles.

25mm and 32mm Self Tapping Ferrule Off-Takes



Fitting includes 1 x PE x Female Iron BSP Tapered End Connector.

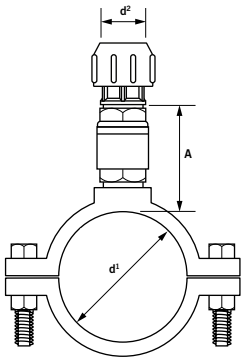


Size (mm) d^1 x d^2	A (mm)	Weight (kg)	Code
63 x 25	95	0.92	44 762 412
90 x 25	95	1.07	44 762 393
110 x 25	95	1.10	44 762 394
125 x 25	95	1.19	44 762 395
160 x 25	95	1.28	44 762 397
180 x 25	95	1.35	44 762 398
225 x 25	95	1.90	44 762 400
250 x 25	95	2.30	44 762 401
280 x 25	95	2.50	44 762 402
315 x 25	95	3.20	44 762 403
355 x 25	95	3.30	44 762 404
63 x 32	100	1.24	44 762 415
90 x 32	100	1.31	44 762 417
110 x 32	100	1.37	44 762 418
125 x 32	100	1.42	44 762 419
160 x 32	100	1.52	44 762 421
180 x 32	100	1.60	44 762 422
225 x 32	100	2.10	44 762 424
250 x 32	100	2.50	44 762 425
280 x 32	100	2.70	44 762 426
315 x 32	100	3.40	44 762 427
355 x 32	100	3.50	44 762 428

63mm Ferrule Off-Takes



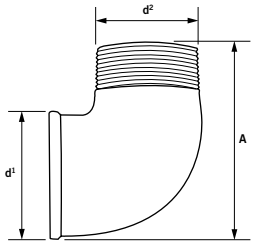
Fitting includes 1 x 63mm PE x Male Iron BSP Tapered End Connector.



Size (mm) d^1 x d^2	A (mm)	Weight (kg)	Code
90 x 63	155	3.38	44 762 459
110 x 63	155	3.77	44 762 460
125 x 63	155	3.79	44 762 461
160 x 63	155	3.73	44 762 463
180 x 63	155	3.88	44 762 464
225 x 63	155	5.01	44 762 466
250 x 63	155	5.12	44 762 467
280 x 63	155	5.29	44 762 468
315 x 63	155	4.97	44 762 469
355 x 63	155	6.12	44 762 470

90º Gunmetal Elbow, FI/MI (for use with 63mm Ferrule Off-Takes)





Size (mm x inch) d^1 x d^2	A (mm)	Weight (kg)	Code
63 x 2	72	0.89	44 996 050

Installation Instructions for 25mm and 32mm Protecta-Line Gunmetal Self-Tapping Ferrule Straps

For use on GPS Protecta-Line pipe only.

Gloves and safety glasses must be worn during the whole assembly process.

The ferrule strap cutter includes a sealing sleeve that prevents water contact with the aluminium barrier layer.

1. Fit the Protecta-Line end connector compression fitting to the ferrule strap male outlet, employing sufficient PTFE tape to ensure a good seal. (It is advisable to rotate the ferrule outlet having first slackened the securing collar).



2. Clean the surface of the Protecta-Line main where the self-tapping ferrule strap is to be installed, avoiding areas which appear damaged.



3. Ensuring that the sealing "O" ring is in place under the upper ferrule strap (and taking care not to damage this on the protruding sleeve), fit the self-tapping ferrule squarely around the main and tighten the two strap bolts evenly and symmetrically.



4. Fit the Protecta-Line service pipe into the compression fitting on the outlet, as described in the separate instructions. After aligning the outlet to the desired position, tighten the securing collar.



5. Remove the plug from the top of the ferrule cap, and, using an 8 or 11mm (depending on service pipe size) square section key, wind down the cutter assembly all the way until hard and solid resistance is felt. Note that before the solid resistance is felt there may be a temporary drop in resistance, followed by an increase as the sleeve around the cutter enters the main.



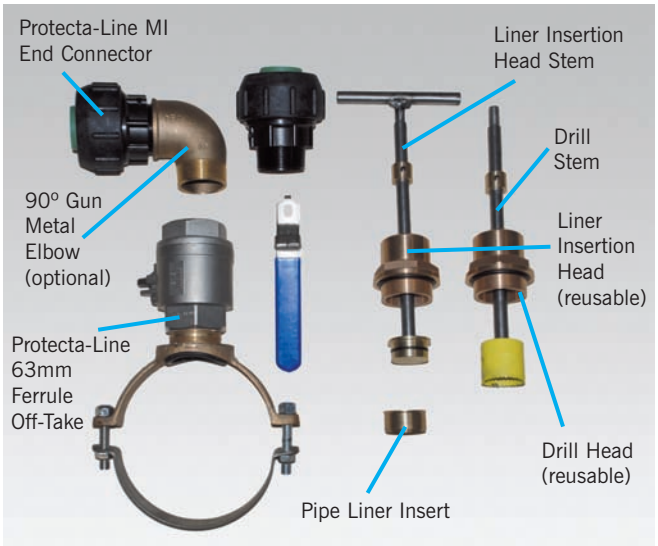
6. Withdraw the cutter all the way up to the top of the stem, employing a final counter-clockwise torque of approximately 15Nm to ensure a good seal and replace the plug. Some leakage through the plughole is normal before the cutter has been fully unscrewed.



Caution: Do not remove cutter or sleeve from this product before use.

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Installation Instructions for 63mm Protecta-Line Gunmetal Ferrule Off-Takes



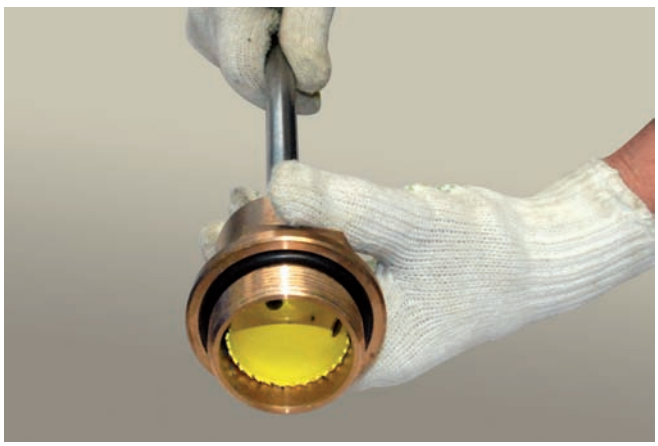
Accessory	Code
* Protecta-Line 2" Drill Head	44 794 003
**Protecta-Line 2" Liner Head	44 794 004
***Protecta-Line Drill/Liner Head O-Ring Kit	44 996 062

*Drill Head setting: fix stop at 230mm from base to drill tip
**Drill Liner setting: fix stop at 180mm from stop base to bottom of tip on liner head
*** Includes four O-rings for replacement in either Drill Head or Liner Head

1. Ensuring that the sealing O-ring is in place under the upper ferrule strap, fit the ferrule squarely around the main in the required position and tighten the two strap bolts evenly and symmetrically. Ensure that ball valve operates correctly before fitting.



2. After assembling the drill stem with a 48mm hole cutter, withdraw the drill stem fully into the drill head.



3. Ensure that the ball valve is in the fully open position (anti-clockwise rotation). Fit the drill head to the outlet of the ferrule.



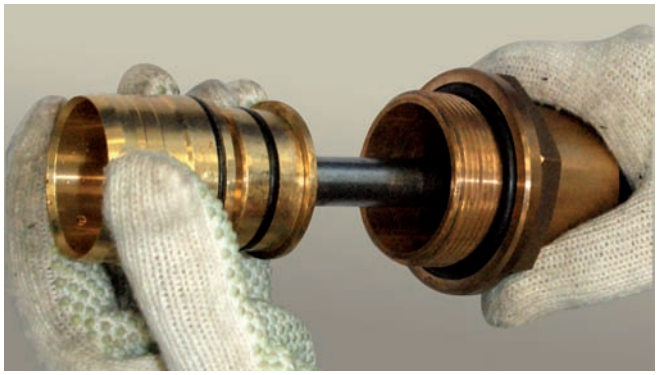
4. Attach the chuck of an electric drill to the top of the drill stem (ensuring that the power supply is disconnected).
Re-connect the power supply to the electric drill and operate the drill with downward pressure until the stop on the drill stem contacts the top of the drill head.



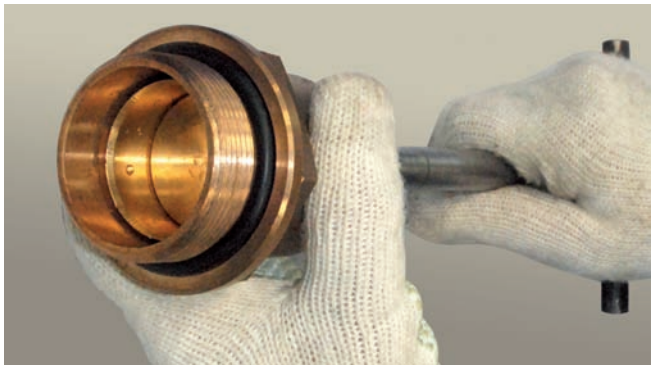
5. Disconnect the power supply to the electric drill and remove the drill from the drill stem. Withdraw the drill stem, until the cutter is fully returned into the drill head and fully close the ball valve (clockwise rotation) before removing the drill head from the outlet of the ferrule.



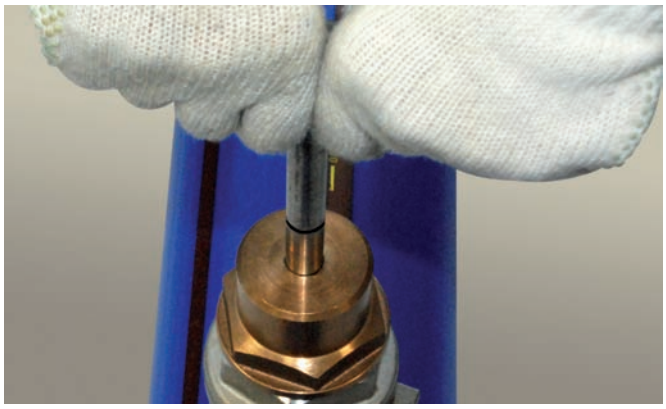
6. Position the liner insert onto the carrier of the liner insertion head.



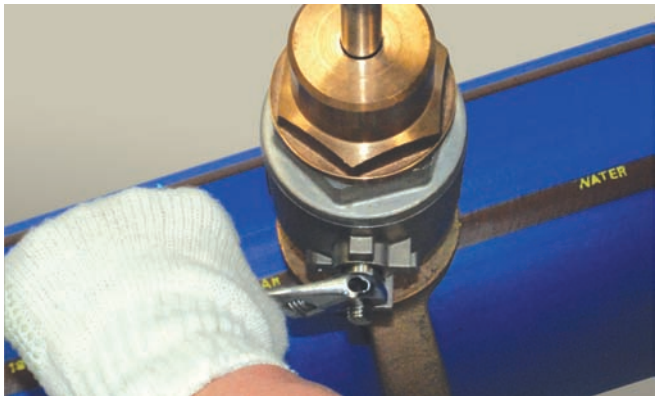
7. Fully withdraw the carrier and pipe liner insert into the liner insert head (indicated by the lower depth mark on the stem).



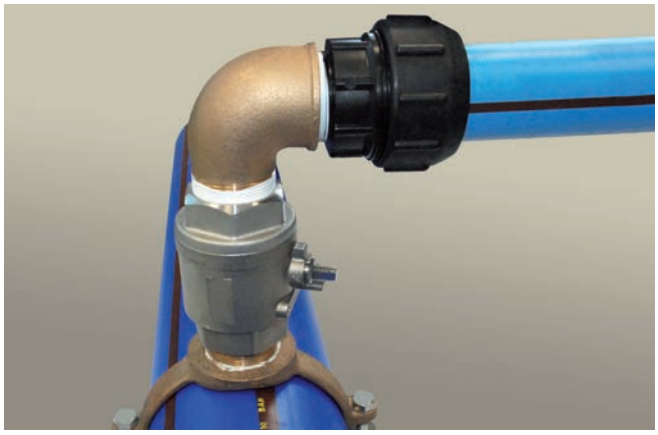
8. Fit the liner insertion head to the outlet of the ferrule. Open the ball valve (anti-clockwise rotation) and fully insert the liner insert, by applying downward pressure on the tee-bar handle on the shaft of the liner insertion head until the stop on the liner insertion head stem contacts the top of the liner insertion head.



9. Withdraw the liner insertion head stem until the carrier is fully withdrawn into the liner insert head (indicated by the lower depth mark on the stem). Close the ball valve (clockwise rotation) and remove the liner insertion head.



10. The communication pipe can now be fitted to the outlet of the ferrule utilising a Protecta-Line 63mm x 2" MI mechanical end connector, either directly to the ferrule outlet (side connection) or in conjunction with 2" MI/FI 90° elbow (top connection).



11. Open the ball valve (anti-clockwise rotation).

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Protecta-Line Fluid Compression Fittings

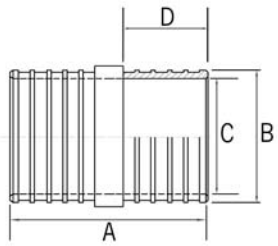
Protecta-Line fluid compression fittings are available for pipe sizes from 63mm to 180mm, to suit the SDR and PE class employed. The fittings comprise of a shell, or one or more half-shells, made from epoxy coated steel featuring an integral inner copper membrane. A simple pipe support liner is provided, again made from Rilsan coated steel. Fluid Compression Fittings are available as Couplers, Repair Couplers, Reducers, 90° Elbows, 45° Elbows, Equal Tees, Stub Flanges, Flanged Branch Tees and Duck Foot Bends. No pipe preparation or subsequent joint wrapping is required.

- Easy all weather installation.
- 100% barrier protection without wrapping.
- WIS 4-24-01 Type 1 approved fitting (fully end load bearing).
- PE core pipe swages closely into the insert liner grooves to give a perfect seal without the need for any elastomeric seals.
- Compatible with pipe rating.
- Uses environmentally friendly Protecta-Line hydraulic fluid.
- Outer shell and sleeve are Rilsan and epoxy coated for maximum corrosion resistance.

Couplers

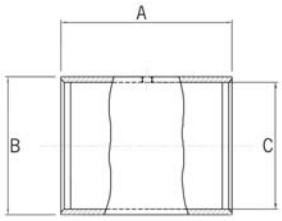


Consists of 1 x liner and 1 x standard full sized shell. Weight shown is for complete product.



Full Shell Dimensions

Size (mm)	A (mm)	B (mm)	C (mm)
63	102	84	66
90	136	111	94
110	161	133	114
125	180	196	130
160	200	184	166
180	230	207	188

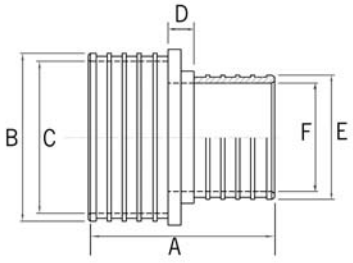


Size (mm)	SDR 11 Liner Dimensions						SDR 17 Liner Dimensions					
	A (mm)	B (mm)	C (mm)	D (mm)	Weight (kg)	SDR 11 Code	A (mm)	B (mm)	C (mm)	D (mm)	Weight (kg)	SDR 17 Code
63	82	50	43	36	1.3	44 110 311	-	-	-	-	-	-
90	116	71	62	53	2.7	44 100 313	-	-	-	-	-	-
110	141	87	74	60	4.8	44 100 314	-	-	-	-	-	-
125	-	-	-	-	-	-	160	107	95	70	6.2	44 109 315
160	-	-	-	-	-	-	180	138	122	80	11.2	44 109 317
180	-	-	-	-	-	-	210	155	137	95	15.5	44 109 318

Reducers

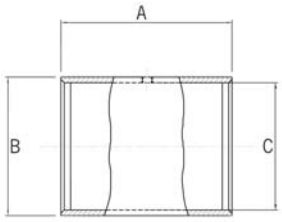


Consists of 1 x reducing liner and 2 x half sized shells. Weight shown is for complete product.



Half Shell Dimensions

Size (mm)	A (mm)	B (mm)	C (mm)
63	102	79	66
90	111	110	94
110	125	133	114
125	125	196	130
160	150	184	166
180	172	207	188

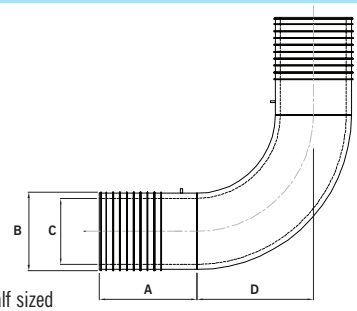


Size (mm)	SDR 11 Liner Dimensions								SDR 17 Liner Dimensions							
	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)	Weight (kg)	SDR 11 Code	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)	Weight (kg)	SDR 17 Code
90 x 63	260	71	62	81	50	43	4.3	44 441 459	-	-	-	-	-	-	-	-
110 x 90	290	87	75	100	71	62	7.3	44 441 483	-	-	-	-	-	-	-	-
125 x 110*	-	-	-	-	-	-	-	-	428	107	95	152	86	74	8.4	44 440 493
160 x 125	-	-	-	-	-	-	-	-	335	138	125	87	95	83	15.9	44 440 504
180 x 125	-	-	-	-	-	-	-	-	340	156	142	114	108	96	18.7	44 440 505

Please note that both ends of all reducers are for the stated SDR.
* 125mm SDR17 reducing down to 110mm SDR11.

90º Elbows

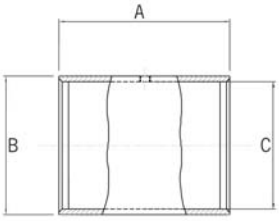




Consists of 1 x elbow liner and 2 x half sized shells. Weight shown is for complete product.

Half Shell Dimensions

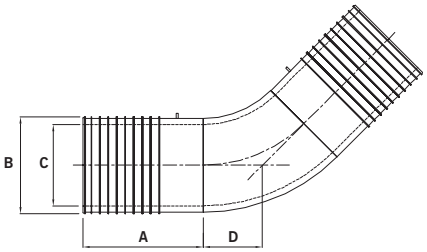
Size (mm)	A (mm)	B (mm)	C (mm)
63	102	79	66
90	111	110	94
110	125	133	114
125	125	196	130
160	150	184	166
180	172	207	188



Size (mm)	SDR 11 Liner Dimensions						SDR 17 Liner Dimensions					
	A (mm)	B (mm)	C (mm)	D (mm)	Weight (kg)	SDR 11 Code	A (mm)	B (mm)	C (mm)	D (mm)	Weight (kg)	SDR 17 Code
63	115	50	43	81	3.0	44 209 311	-	-	-	-	-	-
90	124	71	61	100	5.4	44 210 313	-	-	-	-	-	-
110	138	87	74	119	9.5	44 210 314	-	-	-	-	-	-
125	-	-	-	-	-	-	138	107	95	87	11.3	44 208 315
160	-	-	-	-	-	-	167	137	122	114	22.2	44 208 317
180	-	-	-	-	-	-	192	155	137	130	27.7	44 208 318

45º Elbows

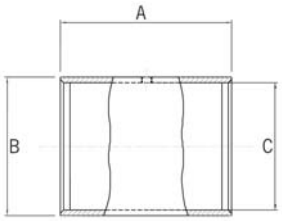




Consists of 1 x elbow liner and 2 x half sized shells. Weight shown is for complete product.

Half Shell Dimensions

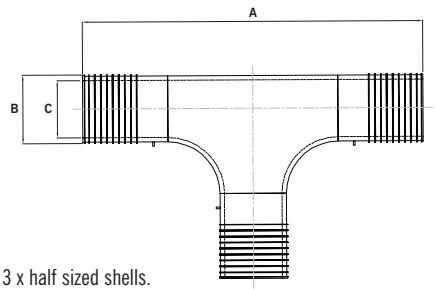
Size (mm)	A (mm)	B (mm)	C (mm)
63	102	79	66
90	111	110	94
110	125	133	114
125	125	196	130
160	150	184	166
180	172	207	188



Size (mm)	SDR 11 Liner Dimensions						SDR 17 Liner Dimensions					
	A (mm)	B (mm)	C (mm)	D (mm)	Weight (kg)	SDR 11 Code	A (mm)	B (mm)	C (mm)	D (mm)	Weight (kg)	SDR 17 Code
63	115	50	43	40	2.9	44 215 311	-	-	-	-	-	-
90	124	71	61	49	5.2	44 216 313	-	-	-	-	-	-
110	138	87	74	56	9.2	44 216 314	-	-	-	-	-	-
125	-	-	-	-	-	-	138	107	95	74	10.7	44 214 315
160	-	-	-	-	-	-	167	137	122	89	21.1	44 214 317
180	-	-	-	-	-	-	192	155	137	105	25.9	44 214 318

Equal Tees

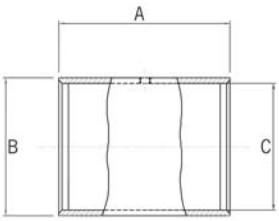




Consists of 1 x equal tee liner and 3 x half sized shells. Weight shown is for complete product.

Half Shell Dimensions

Size (mm)	A (mm)	B (mm)	C (mm)
63	102	79	66
90	111	110	94
110	125	133	114
125	125	196	130
160	150	184	166
180	172	207	188

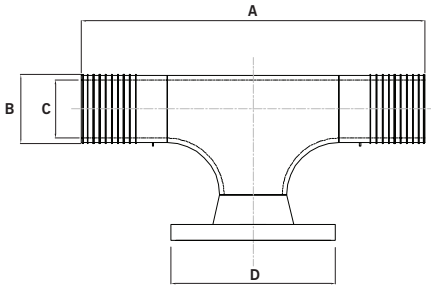


Size (mm)	SDR 11 Liner Dimensions					SDR 17 Liner Dimensions				
	A (mm)	B (mm)	C (mm)	Weight (kg)	SDR 11 Code	A (mm)	B (mm)	C (mm)	Weight (kg)	SDR 17 Code
63	362	50	43	5.3	44 221 311	-	-	-	-	-
90	404	71	61	9.5	44 222 313	-	-	-	-	-
110	452	87	74	15.9	44 222 314	-	-	-	-	-
125	-	-	-	-	-	500	107	95	19.6	44 220 315
160	-	-	-	-	-	596	137	122	36.7	44 220 317
180	-	-	-	-	-	634	155	137	47.2	44 220 318

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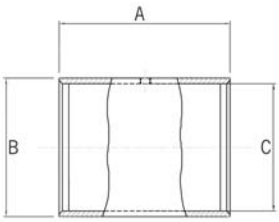
Flanged Branch Tees





Half Shell Dimensions

Size (mm)	A (mm)	B (mm)	C (mm)
90	111	110	94
110	125	133	114
125	125	196	130
160	150	184	166
180	172	207	188



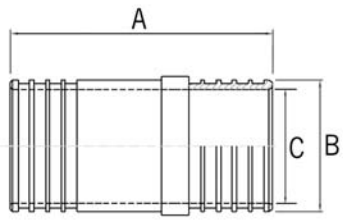
Consists of 1 x flanged branch tee liner and 2 x half sized shells. Weight shown is for complete product. (Bolt set not supplied).

Size (mm x PN)	Bolting	Torque (Nm+/- 10%)	PCD	SDR 11 Liner Dimensions						SDR 17 Liner Dimensions					
				A (mm)	B (mm)	C (mm)	D (mm)	Weight (kg)	SDR 11 Code	A (mm)	B (mm)	C (mm)	D (mm)	Weight (kg)	SDR 17 Code
90 x DN80 PN16	M16 X 8	70	160	404	71	62	200	11.0	44 351 313	-	-	-	-	-	-
110 x DN80 PN16	M16 X 8	70	160	448	86	74	200	NA	44 351 314	-	-	-	-	-	-
125 x DN80 PN16	M16 X 8	70	160	-	-	-	-	-	-	436	108	96	200	19.0	44 363 315
160 x DN80 PN16	M16 X 8	70	160	-	-	-	-	-	-	590	138	121	200	NA	44 363 317
180 x DN80 PN16	M16 X 8	70	160	-	-	-	-	-	-	634	156	142	200	42.5	44 363 318
90 x DN100 PN16	M16 X 8	80	180	404	71	62	220	11.9	44 352 313	-	-	-	-	-	-
110 x DN100 PN16	M16 X 8	80	180	448	86	74	220	NA	44 352 314	-	-	-	-	-	-
125 x DN100 PN16	M16 X 8	80	180	-	-	-	-	-	-	500	108	96	220	19.9	44 364 315
160 x DN100 PN16	M16 X 8	80	180	-	-	-	-	-	-	590	138	121	220	NA	44 364 317
180 x DN100 PN16	M16 X 8	80	180	-	-	-	-	-	-	634	156	142	220	41.5	44 364 318
160 x DN150 PN16	M20 X 8	120	240	-	-	-	-	-	-	590	138	121	285	NA	44 365 317
180 x DN150 PN16	M20 X 8	120	240	-	-	-	-	-	-	634	156	142	285	43.9	44 365 318

The information given for bolting torque values are for metal to metal connections. Drilled to BS EN 1092-1:2007 Table 13.

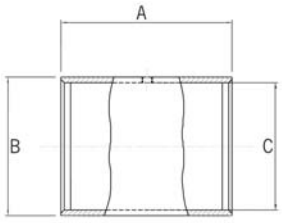
Repair Couplers





Repair Shell Dimensions

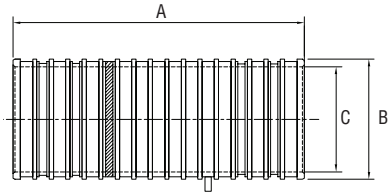
Size (mm)	A (mm)	B (mm)	C (mm)
63	145	79	66



Consists of 1 x repair coupler liner and 1 x repair coupler sized shell. Weight shown is for complete product.

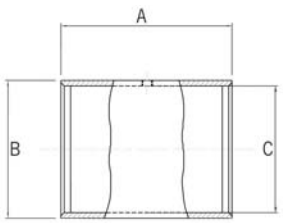
Size (mm)	SDR 11 Liner Dimensions					SDR 17 Liner Dimensions				
	A (mm)	B (mm)	C (mm)	Weight (kg)	SDR 11 Code	A (mm)	B (mm)	C (mm)	Weight (kg)	SDR 17 Code
63	126	50	43	1.7	44 246 311	-	-	-	-	-





Repair Half Shell Dimensions

Size (mm)	A (mm)	B (mm)	C (mm)
90	111	110	66
110	125	133	114
125	125	196	130
160	150	184	166
180	172	207	188

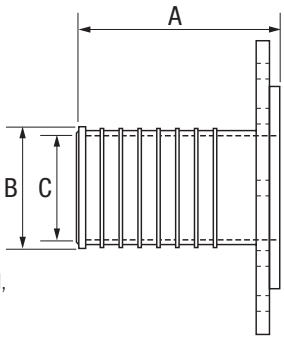


Consists of 1 x repair coupler liner and 2 x half sized shells.

Size (mm)	SDR 11 Liner Dimensions					SDR 17 Liner Dimensions				
	A (mm)	B (mm)	C (mm)	Weight (kg)	SDR 11 Code	A (mm)	B (mm)	C (mm)	Weight (kg)	SDR 17 Code
90	177	71	61	3.5	44 246 313	-	-	-	-	-
110	203	86	74	6.0	44 246 314	-	-	-	-	-
125	-	-	-	-	-	236	107	95	7.7	44 245 315
160	-	-	-	-	-	269	122	122	12.5	44 245 317
180	-	-	-	-	-	319	155	137	20.4	44 245 318

Stub Flange Adaptors

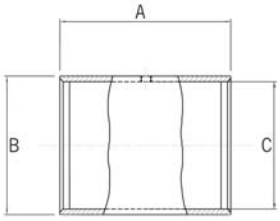




Consists of 1 x stub flange liner, 1 x half sized shell, backing ring and gasket. (Bolt set not supplied)

Half Shell Dimensions

Size (mm)	A (mm)	B (mm)	C (mm)
63	102	79	66
90	111	110	94
110	125	133	114
125	125	196	130
160	150	184	166
180	172	207	188

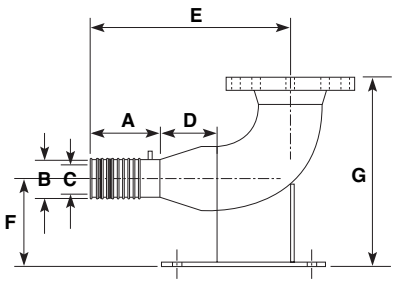


Size (mm x PN)	Bolting	Torque (Nm+/- 10%)	PCD	SDR 11 Liner Dimensions					SDR 17 Liner Dimensions				
				A (mm)	B (mm)	C (mm)	Weight (kg)	SDR 11 Code	A (mm)	B (mm)	C (mm)	Weight (kg)	SDR 17 Code
63 x DN50 PN16	M16 X 4	60	125	115	50	43	3.1	44 227 311	-	-	-	-	-
63 x DN80 PN16	M16 X 8	70	160	115	50	43	3.4	44 228 311	-	-	-	-	-
90 x DN80 PN16	M16 X 8	70	160	124	71	62	6.0	44 228 313	-	-	-	-	-
110 x DN100 PN16	M16 X 8	80	180	138	87	75	8.9	44 228 314	-	-	-	-	-
125 x DN100 PN16	M16 X 8	80	180	-	-	-	-	-	138	108	96	10.9	44 226 315
160 x DN150 PN16	M20 X 8	120	240	-	-	-	-	-	167	138	125	17.9	44 226 317
180 x DN150 PN16	M20 X 8	120	240	-	-	-	-	-	192	156	142	21.9	44 226 318

The information given for bolting torque values are for metal to metal connections.
Drilled to BS EN 1092-1:2007 Table 13.

Duck Foot Bends

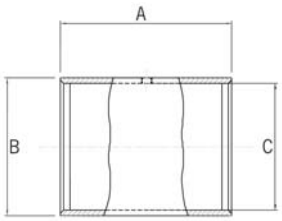




Consists of 1 x flanged bend, 1 x half sized shell and gasket. (Bolt set not supplied)

Half Shell Dimensions

Size (mm)	A (mm)	B (mm)	C (mm)
63	102	79	66
90	111	110	94
110	125	133	114
125	125	196	130
160	150	184	166
180	172	207	188



Size (mm x PN)	Bolting	Torque (Nm+/- 10%)	PCD	Weight (kg)	SDR 11 Liner Dimensions								SDR 17 Liner Dimensions							
					A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)	G (mm)	SDR 11 Code	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)	G (mm)	SDR 17 Code
63 x DN80 PN16	M16 x 8	70	160	9.0	115	50	43	89	320	135	300	44 384 459	-	-	-	-	-	-	-	-
90 x DN80 PN16	M16 x 8	70	160	9.0	124	71	62	89	320	135	300	44 384 313	-	-	-	-	-	-	-	-
110 x DN80 PN16	M16 x 8	70	160	9.5	138	87	75	N/A	240	135	300	44 384 483	-	-	-	-	-	-	-	-
125 x DN80 PN16	M16 x 8	70	160	13.5	-	-		-	-	-	-	-	138	108	96	N/A	245	135	300	44 385 484
160 x DN80 PN16	M16 x 8	70	160	-	-	-		-	-	-	-	-	167	138	125	102	370	135	300	44 385 486
180 x DN80 PN16	M16 x 8	70	160	16.5	-	-		-	-	-	-	-	192	156	142	127	420	135	300	44 385 487

The information given for Bolting Torque Values are for metal to metal connections.
Drilled to BS EN 1092-1:2007 Table 13.

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Accessories



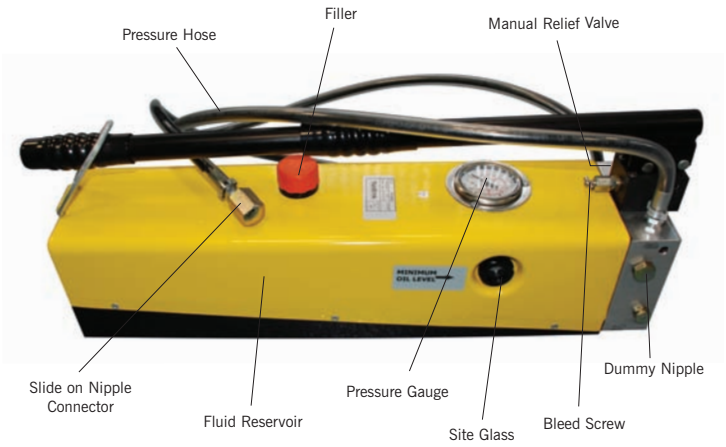
Hydraulic pump available for hire through the following outlets:
MCA Hire Services
www.mcahire.com
Plant & Site Services Ltd.
www.psshire.com

Accessory	Weight (kg)	Code
Aluminium wrapping tape (45m long x 50mm wide).	0.5	44 996 008
Hydraulic Pump	12.0	44 996 009
Protecta-Line hydraulic fluid (5 litres)	5.0	44 996 010

Only Protecta-Line hydraulic fluid should be used with the pump as any other type of fluid can damage it.

Installation Instructions for Protecta-Line Fluid Compression Fittings - Pressurising the Joint

Gloves and safety glasses must be worn during the whole assembly process. Residual pressure within the fitting may be released while removing the connector, causing a momentary spurt of fluid.



1. A calibrated hydraulic pump must be used for all pressurisation of the Protecta-Line fluid compression fitting range. The pump must be filled with Protecta-Line hydraulic fluid.

2. Slide the nipple connector over the nipple on the Protecta-Line fluid compression fitting. Please note that the nipple connector is a slide fit over the nipple, not a push fit. An alternative nipple connector, secured in position by a knurled nut may be fitted. Care should be taken not to overtighten the connector and damage the seal.

3. Gently raise and lower the pump handle, watching the pressure gauge. As the pressure gauge approaches 260 bar, the pressure breaker valve will activate. This indicates that the required pressure has been achieved. Wait 10 seconds and repeat the pumping action until the pressure breaker valve activates. Wait 10 seconds and repeat again. The pressure gauge should now show a steady reading of approximately 260 bar. The joint is now made.

4. **The pressure must be released before removing the slide-on fitting connector from the Protecta-Line Fluid Compression shell.** Depress the manual relief valve on the pump for 2 seconds then slide off the nipple connector from the Protecta-Line fluid compression fitting.

5. If for any reason the nipple needs to be removed, the pressure in the fitting **must** be released first by using the pressure release tool, i.e. depressing the centre part of the fitting nipple. (N.B. Care should be taken as a momentary spurt of fluid may occur).

6. Check that the marks on the pipe still line up with the end of the fitting.

7. The joint is now complete.

Fluid Quantities

Approximate fluid quantities to pressure the fitting shell (full shell):

Shell Size	Fluid Quantity (cc)	Number of Shells/Litre
63	40	25 Approx
90	90	11 Approx
110	150	6 Approx
125	190	5 Approx
160	320	3 Approx
180	375	2 Approx

Only Protecta-Line hydraulic fluid should be used with the pump as any other type of fluid can damage it.

Alternative Nipple Connector

1. An alternative style nipple connector is fitted to some hydraulic pumps.

2. The nipple connector slides over the nipple of the Protecta-Line Fluid Compression fitting and is secured in position by screwing the knurled nut at the top. Care should be taken not to overtighten the connector and damage the seal.

3. After the pressure is released (Stage 4) the nipple connector is removed by first unscrewing the knurled nut at the top of the connector sufficiently to slide the connector off of the nipple.



How to Bleed the Pump

Gloves and safety glasses must be worn during the whole assembly process.



Pumps fitted with a bleed screw



1. The bleed screw is positioned below the pump handle at the rear of the block.
2. Park the nipple connector onto the dummy nipple positioned on the pump block.
3. Raise handle to fullest extent.
4. Turn bleed screw anti-clockwise approximately one quarter of a turn.
5. Lower handle applying gentle pressure, oil will dribble out of the bleed valve.
6. Once the handle has reached the end of its stroke turn the bleed valve clockwise until solid.
7. Wipe any excess oil from around the bleed valve.
8. Check for pressurisation and repeat the bleed operation sequence if necessary.

   Note: Residual pressure within the system may be released while removing the nipple connector, causing a momentary spurt of fluid.

9. If unit still fails to pressurise after bleeding, return to supplier.

Pumps not fitted with a bleed screw

1. Park the nipple connector onto the dummy nipple positioned on the pump block.
2. Activate the manual relief valve and hold down.
3. Raise and lower the pump handle ten times, in each case achieving maximum stroke.
4. Release the manual relief valve.
5. Check for pressurisation and repeat bleed operation sequence if necessary.
6. Operate the manual relief valve and remove the nipple connector from the dummy nipple.

   Note: Residual pressure within the system may be released while removing the nipple connector, causing a momentary spurt of fluid.

7. If unit still fails to pressurise after bleeding, then return to supplier.

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Jointing Instructions for 63mm-180mm Protecta-Line Fluid Compression Fittings (Mains Pipes)

For use on GPS Protecta-Line pipe only.

Gloves and safety glasses must be worn during the whole assembly process.

1. Inspect the end of the pipes to be joined for any obstruction, removing any large burrs or ridges. Check the pipe ends are reasonably square.



2. Using a tape measure and a suitable marker pen mark the appropriate dimension "X" from the ends of the pipes to be joined.

63 - 47mm	110 - 71mm	160 - 91mm
90 - 64mm	125 - 81mm	180 - 106mm



3. Slide the outer shell over the pipe end (where there is evidence that the pipe has some degree of ovality then the pipe end should be re-rounded).
   Push the insert into the pipe end making sure that the pipe end is firmly against the shoulder of the insert.



For all fittings other than the coupler and repair coupler, the marking dimensions are as follows:

63 – 102mm	110 – 125mm	160 – 150mm
90 – 111mm	125 – 125mm	180 – 172mm

Note: The insert should be pushed into the pipe spigot until the stop is reached. The outer shell should be positioned so that one edge is aligned with the mark on the pipe and the other aligned with the end of the pipe. The spigots of stub flanges should be fully inserted into the pipe end upto the flange.

4. Connect the pipe and insert on to the free pipe end and push home fully, ensuring that both pipe spigot ends are in contact with the central stop of the insert.



5. Slide the outer shell over the assembly until the two marks on each end of the pipe are visible at each end of the outer shell.



6. The joint is now ready to be pressurised. Follow the pressurisation procedure.

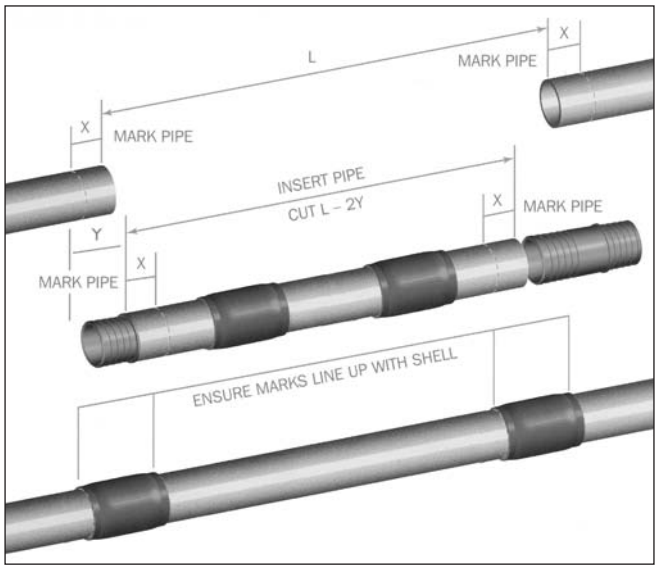




Jointing Instructions for Protecta-Line Fluid Compression Repair Fittings

63mm Repair Couplers

Gloves and safety glasses must be worn during the whole assembly process



Pipe Diameter	X	2Y	Min 'L'
63	47	108	400

- Remove damaged Protecta-Line pipe section. The length removed, L, must be at least as long as stated in the table.
- Mark pipe ends left in the ground 'X' mm from ends using the repair gauge and marker pen.
- Cut length of new Protecta-Line pipe L - 2Y long and also mark 'X' mm in from each end. Note Y = insert liner spigot shorter length + shoulder.
- Slide 2 repair shells over the new pipe section and push the longer spigots of the associated insert liners into both ends of this section.
- Position the new pipe section in line with the existing pipe in the ground and move both the insert liners outwards until their shoulders are hard against the cut ends of the existing pipe.
- Slide the two repair shells outwards so that the four marks previously made line up with the ends of the shells.
- Both repair fittings are now ready to be pressurised as per above.

90–180mm Repair Couplers

Gloves and Safety Glasses must be worn during the whole assembly process



1. Cut out the damaged pipe section. The minimum length of the cut is shown in the table below.



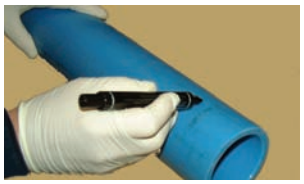
2. The pipe should be internally deburred with a polyethylene deburring tool.



3. Where there is evidence that the pipe spigot has some degree of ovality, then the pipe spigot should be re-rounded.



4. From an undamaged pipe length cut out a repair piece. The length of the repair piece should be equal to the length of the cut out less the dimension 'Y' (see table below).



5. Clearly mark the penetration depth (dimension 'Z') on spigot ends (see table below).



6. Clearly mark dimensions on the new pipe.



7. Push the repair coupler inserts into the pipe with the short end of the repair couplers protruding. Ensure that the pipe ends are firmly against the stops on the inserts. Slide the repair coupler half shells on to the new pipe.



8. Slide the remaining half shells onto the pipe where the repair coupler inserts are to be fitted and insert the repair section with inserts into the pipeline. Slide the repair couplers and shells into position.



9. Ensure that the shells line up with the marks on the pipe. The joint is now ready to be pressurised. Please follow pressurisation procedure.

Pipe Diameter	Cut out Length (Min)	Dimension Y	Dimension Z
90	390	128	66
110	440	145	75
125	525	168	85
160	570	182	92
180	690	235	117

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Protecta-Line Electrofusion Fittings

Protecta-Line Electrofusion Fittings are supplied for use with pipe sizes in sizes 90mm to 355m.

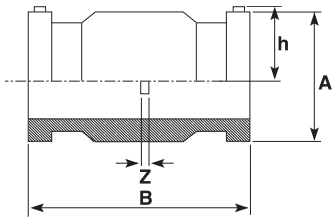
Each fitting has a barcode to allow Electrofusion Control Units (ECU's) to read information such as Product Type and Size, Fusion Time and Cooling Time to ensure quick and easy installation. Fittings can be jointed either in manual mode or by scanning their integral barcode label.

- Easy and rapid installation.
- Can be carried out in a trench, especially useful for repairs or tie-ins.
- Proven barrier protection against contamination.
- No risk of joint corrosion.
- No contact between the pipe's protective aluminium layer and drinking water.

Couplers - 39.5 Volt


90mm-180mm

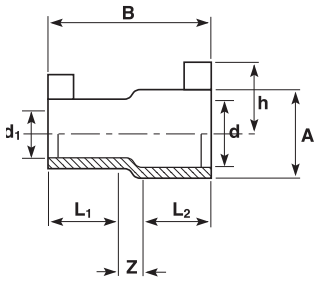

225mm-355mm



Size (mm)	A (mm)	B (mm)	h (mm)	Z (mm)	Weight (kg)	Fusion Time (Sec)	Cooling Time (mins)	Code
90	119	127	74	3	0.60	120	8	PL100313
110	141.5	135	82	3	0.80	160	10	PL100314
125	158.5	147	92	3	1.10	180	12	PL100315
160	198	164	113	3	1.60	300	14	PL100317
180	221	167	123	3	2.10	400	16	PL100318
225	278	220	145	8	3.90	500	18	PL100320
250	310	224	155	8	5.10	600	20	PL100321
280	341	256	175	8	7.10	700	28	PL100322
315	389	291	192	8	9.50	980	30	PL100323
355	405	295	218	4	9.00	980	28	PL100324

Reducer - 39.5 Volt

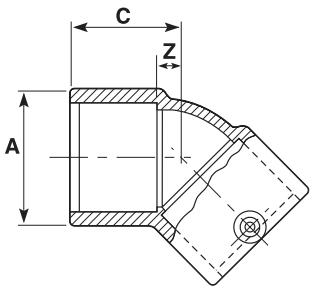




Size (mm) d x d_1	A (mm)	B (mm)	L_1 (mm)	L_2 (mm)	h (mm)	Z (mm)	Weight (kg)	Fusion Time (Sec)	Cooling Time (mins)	Code
110 x 90	136	189	72	85	83	32	0.9	200	12	PL402483
125 x 90	155	210	67	90	91	53	1.2	180	14	PL402484
125 x 110	156	201	73.5	95	93	32.5	1.3	240	14	PL402493
160 x 110	195	254	72	101	114	81	2.2	300	14	PL402495
180 x 125	214	276	83	110	124	83	2.6	300	16	PL402505

45º Elbows - 39.5 Volt

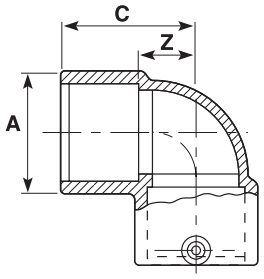




Size (mm)	A (mm)	C (mm)	Z (mm)	Weight (kg)	Fusion Time (Sec)	Cooling Time (mins)	Code
90	115	89	20	0.8	120	10	PL105313
110	136	97	27	1.0	160	10	PL105314
125	156	105	30	1.4	180	12	PL105315
160	198	120	36	2.6	300	16	PL105317
180	223	128	40	3.4	400	18	PL105318

90º Elbows - 39.5 Volt

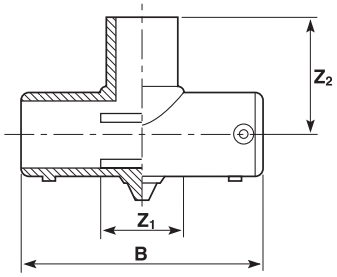




Size (mm)	A (mm)	C (mm)	Z (mm)	Weight (kg)	Fusion Time (Sec)	Cooling Time (mins)	Code
90	114.5	118	49	0.9	120	10	PL104313
110	137	130	60	1.3	160	10	PL104314
125	155.5	143	67	1.8	180	12	PL104315
160	199	171	87	2.6	300	16	PL104317
180	222	185	98	4.4	400	18	PL104317

Equal Tees - 39.5 Volt



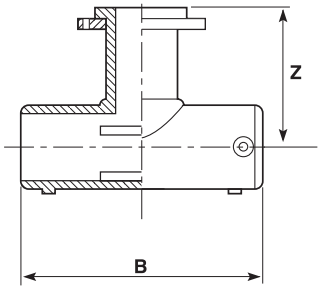


Size (mm)	B (mm)	Z_1 (mm)	Z_2 (mm)	Weight (kg)	Fusion Time (Sec)	Cooling Time (mins)	Code
90	211	83.5	150	1.1	120	10	PL408313
110	240	108	171	1.7	160	10	PL408314
125	280	119	177	2.3	240	12	PL408315
160	314	150	227	4.4	260	14	PL408317
180	365	161	225	5.8	440	20	PL408318

Supplied factory-wrapped to ensure complete barrier performance.

Flanged Branch Tees - 39.5 Volt





Size (mm)	B (mm)	Z (mm)	Weight (kg)	Fusion Time (Sec)	Cooling Time (mins)	Code
90 x 80 PN16	211	296	2.6	12	10	PL301313
110 x 80 PN16	240	515	3.9	160	10	PL301314
125 x 80 PN16	280	532	4.7	240	12	PL301315
160 x 80 PN16	314	615	6.7	260	14	PL301317
180 x 80 PN16	365	834	7.9	440	20	PL301318
90 x 100 PN16	211	534	3.2	100	10	PL302313
110 x 100 PN16	240	310	3.9	160	10	PL302314
125 x 100 PN16	280	301	4.3	240	12	PL302315
160 x 100 PN16	314	650	7.6	260	14	PL302317
180 x 100 PN16	365	671	9.2	440	20	PL302318
160 x 150 PN16	314	410	8.5	260	14	PL303317
180 x 150 PN16	365	415	5.2	440	20	PL303318

Supplied factory-wrapped to ensure complete barrier performance.

Flange Adaptor Kits



Adaptor Kit comprises of:-

- 1 x Stub Flange
- 1 x Coupler
- 1 x Gasket (representation)
- 1 x Backing Ring
- 1 x Bolt set

Size (mm)	SDR 11 Code	SDR 17 Code
90 x 80 PN16	PL251313	
110 x 100 PN16	PL251314	
125 x 100 PN16		PL250315
160 x 150 PN16		PL250317
180 x 150 PN16		PL250318
225 x 200 PN16		PL250320
250 x 200 PN16		PL250534
250 x 250 PN16		PL250321
280 x 250 PN16		PL250542
315 x 250 PN16		PL250543
315 x 300 PN16		PL250323
355 x 300 PN16		PL250547
355 x 350 PN16		PL250324

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Procedures for Butt-Fusion and Electrofusion of Protecta-Line Pipelines of 90mm and above in Diameter

When made in accordance with GPS PE Pipe Systems' recommended procedures, butt-fusion and electrofusion joints of the Protecta-Line system have been independently shown to meet the requirements of WIS 4-32-19 without any need for subsequent wrapping. This does not exempt installers from local regulations and the local Water Company preferences must be adhered to.

Standard butt-fusion and electrofusion procedures must be adhered to, but please note the following additional points:.

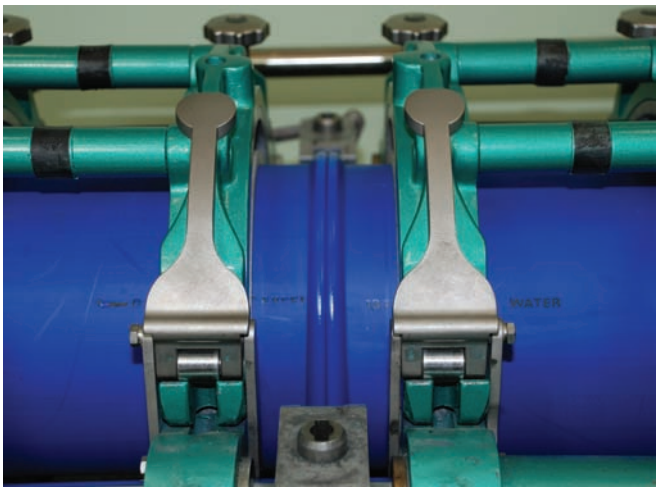
Butt-Fusion

Where this is permitted by the local water company, it is important that the outer PE and aluminium layers are removed far enough back, using the Protecta-Line Surprep tool (see next pages), to prevent the aluminium from coming into contact with the butt-fusion machine trimmer or heater plates.

In addition, the outer PE and aluminium layers should be removed far enough back to permit normal debeading of the completed joint for normal quality control purposes.

It is recommended that the layers should be removed to a length equal to the width of the debeading tool on the end of each pipe. This should be increased by 50% when carrying out dummy weld procedures prior to final jointing.

Butt-fusion clamps should be checked for suitability before commencing work, particularly in larger sizes. Care should be taken not to damage the outer layers of Protecta-Line pipe when clamping it in the butt-fusion machine. In the case of some machines this may necessitate gently radiusing the edges of the jaw shutlines.



Electrofusion

It is essential that the Protecta-Line pipe is properly prepared prior to electrofusion jointing. It is necessary first to remove the outer PE layer, aluminium layer and any residual adhesive layer material.

Note: It is potentially dangerous to carry out electrofusion jointing where the aluminium layer is still in place.

The Protecta-Line Surprep Scraper must be used for pipe end preparation, as it not only removes the outer layers, but it also prepares the core pipe for electrofusion jointing.

Electrofusion clamps should be checked for suitability before commencing work, particularly in larger sizes. All electrofusion joint assemblies must be held in clamps throughout the fusion and cooling periods.

Protecta-Line Jointing End Preparation for Electrofusion Procedures

Pipe Size (mm)	Length (B) (mm)	Register (Z) (mm)	Min preparation insertion depth (mm)	Max preparation depth (mm)
90	127	3	62	67
110	135	3	66	71
125	147	3	72	77
160	164	3	81	86
180	167	3	82	87
225	220	8	106	111
250	224	8	108	113
280	256	8	124	129
315	291	8	142	147
355	295	8	144	149

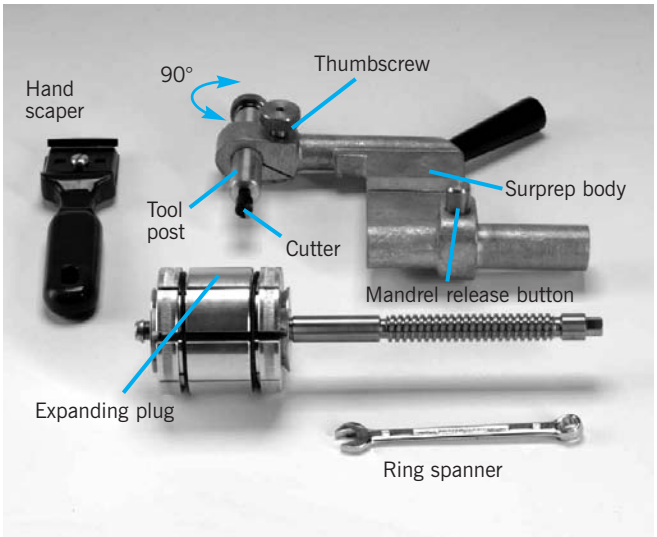
Aluminium Foil Wrapping Lengths - Foil width 50mm

Size (mm)	E/F fitting length (mm)	Amount of foil required (metres)	Joints per roll
25	76	0.38	132
32	83	0.69	72
63	111	2.04	25
90	130	3.37	15
110	135	4.46	11
125	150	5.06	10
160	165	7.41	7
180	165	8.22	6
225	220	14.05	4
250	225	15.71	3
280	260	19.58	3
315	290	25.42	2
355	300	27.12	2

Only Protecta-Line fittings shall be used with Protecta-Line pipe. The use of alternative fittings will have the following effects on your Protecta-Line system:

- Invalidation of WRAS approval and manufacturers system performance warranty.
- Compromised permeation resistance (causing non-compliance with WIS 4-32-19 and possible risks to health).
- Danger of pipe-layer delamination, compromising system performance integrity and risking pipe bursts.
- It would be illegal to install non-WRAS approved fittings.

Procedure for Using the Protecta-Line Surprep Scraper (90mm-180mm)



The Protecta-Line Surprep Kit has been designed to allow the correct scraping of Protecta-Line barrier pipe prior to electrofusion jointing.

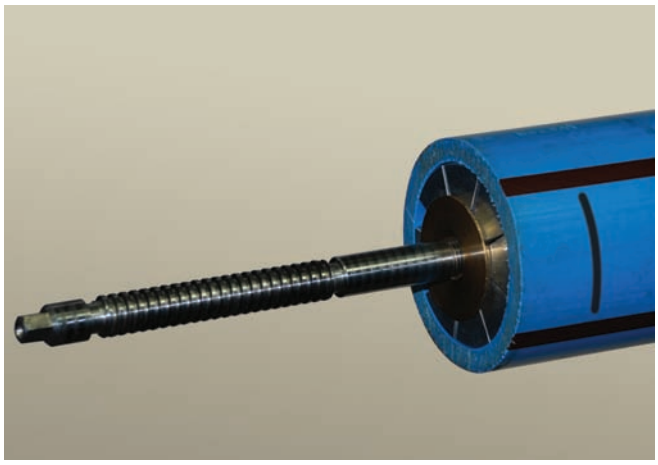
Code	90mm	110mm	125mm	160mm	180mm
01-07-081	●	●			
01-07-083			●	●	●

To order, please contact Caldervale directly on 01924 469571 or sales@caldertech.co.uk

The Surprep Kit is available for hire through MCA Hire Services www.mcahire.com and Plant & Site Services Ltd www.psshire.com

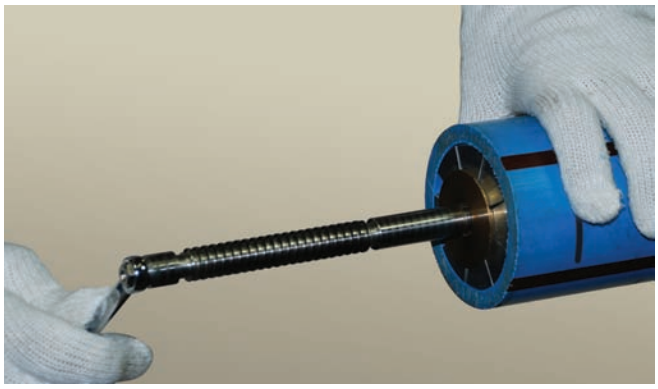


1. Measure the insertion depth of the electrofusion fitting to be used. Place a mark on both pipes to show the position where the edge of the fitting will be.
2. Clamp the pipe to be prepared taking care to avoid damage to the pipe's outer covering.
3. Separate the mandrel from the body of the Protecta-Line Surprep Scraper.

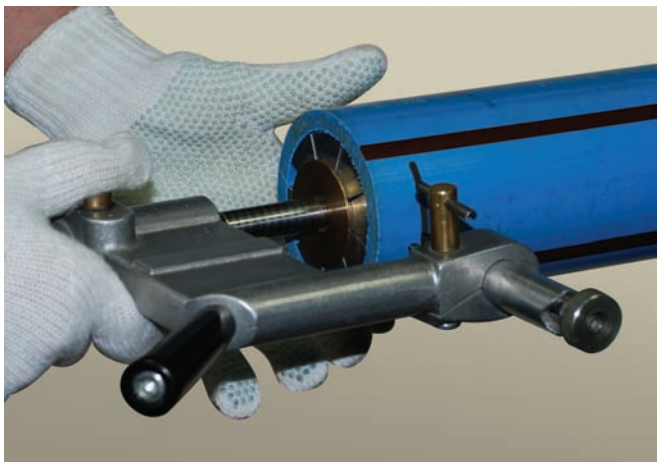


4. Hold the expanding plug and rotate the mandrel anti-clockwise until the plug is a light interference fit in the pipe bore.
5. Push into pipe until edge of plug is level with edge of pipe. Expand plug further using the 10mm ring spanner.

   Do not over-tighten in order to avoid pipe distortion.



6. Slide the body of the Protecta-Line Surprep Scraper onto the mandrel, depress the release button and position the cutter close to the edge of the pipe.



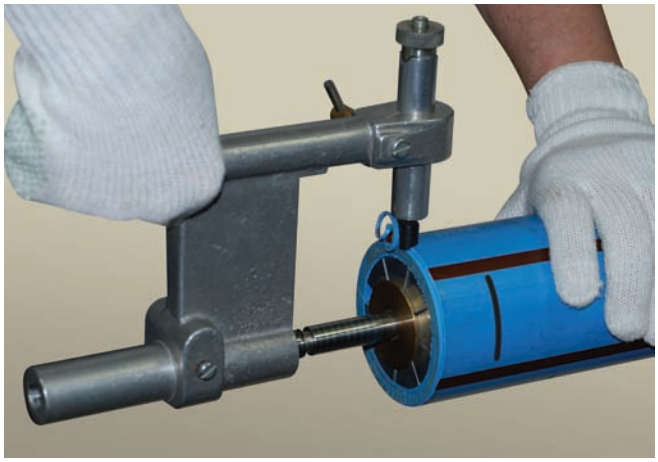
Note: Protecta-Line Surprep Scraper cuts in an anti-clockwise direction, beginning at the end of the pipe.

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7. Rotate the knob on the top of the tool post through 90°, against the spring tension, such that the cutter is in its raised position.



8. Loosen the body thumbscrew and position the cutter shoe on the edge of the pipe. Tighten the thumbscrew.



9. Rotate the knob on top of the post through 90° so that spring pressure is applied to the cutter.
10. Rotate the tool anti-clockwise in a smooth continuous motion to remove the outer layers in a continuous strip.
11. Stop cutting when the socket depth mark is reached.



12. Rotate the knob on top of the tool post so that the spring pressure is released.
13. Use the hand scraper to remove the peeled strip from the pipe.

    Caution: Do not attempt to break the peeled strip by pulling with bare hands, it has a sharp edge!

    Remove the tool in the reverse order of assembly (steps 3-6).

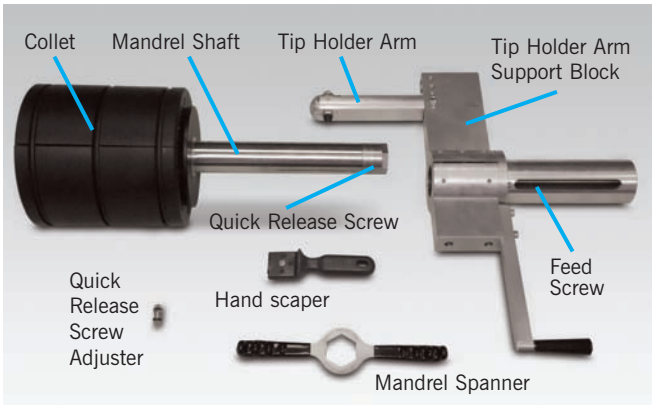


14. Inspect the prepared surface to ensure:
    i) All of the metallic layer has been removed.
    ii) All of the adhesive which bonds the metallic layer to the blue core has been removed.
15. If, for any reason, the prepared surface is not a uniform blue colour all over, use the hand scraper to complete the preparation process.

    Never attempt a second pass with the Protecta-Line Surprep Scraper.

When made in accordance with GPS PE Pipe Systems' recommended procedures, butt-fusion and electrofusion joints of the Protecta-Line system have been independently shown to meet the requirements of WIS 4-32-19 without any need for subsequent wrapping. This does not exempt installers from local regulations and the local Water Company preferences must be adhered to.

Procedure for Using the Large Diameter Protecta-Line Scraper (above 180mm)



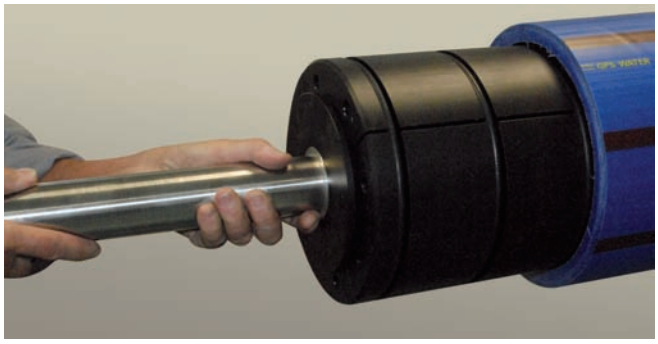
	225mm	250mm	280mm	315mm	355mm
Pipe insert collet					
01-07-255	●				
01-07-256		●			
01-07-257			●		
01-07-258				●	
01-07-259					●
Rotary tool c/w mandrill shaft*					
01-07-251	●	●	●	●	●

* Includes 2 collet expanding cones

To order, please contact Caldervale directly on 01924 469571 or sales@caldertech.co.uk

The Large Diameter Scraper is available for hire through MCA Hire Services www.mcahire.com and Plant & Site Services Ltd www.psshire.com

For Protecta-Line sizes above 180mm, the Surprep Scraper is a dedicated tool for each pipe size, with the cutter set to produce the required outside diameter. Adjustments must be done by a competent person and should not be carried out on site.

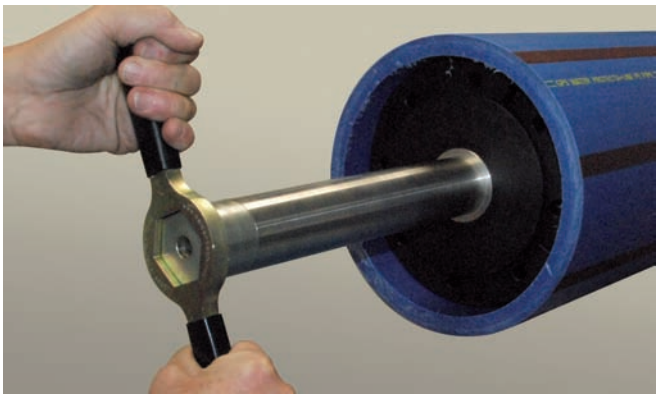


1. First mark the required length of pipe to be scraped (see table on page 23).

   Ensure that the correct size collet for the pipe to be scraped is fitted to the mandrel.

   Adjust the collet by twisting the mandrel shaft anti-clockwise until it achieves its smallest outside diameter.

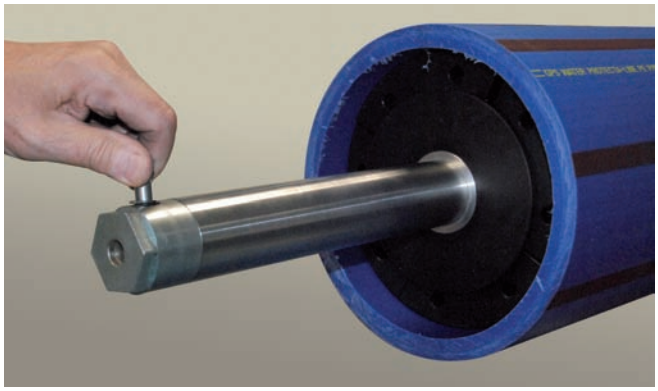
   Slide the collet into the bore of the pipe, allowing 20mm of pipe to show after the collet, to allow for the barrelling effect found at the end of the pipe.



2. Adjust the collet by twisting the mandrel shaft clockwise until the mandrel becomes secure in the bore of the pipe and tighten with the mandrel spanner.

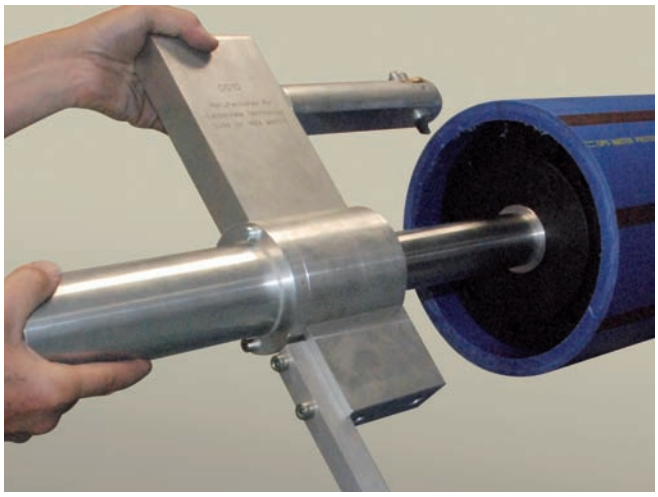
   To achieve the correct alignment parallel to the pipe bore, a joggling action in all directions is required.

   The collet also acts to re-round the pipe so check for gaps between the collet and the bore of the pipe.



3. Once the mandrel is secure and is parallel with the pipe bore, screw down the quick release screw to its full extent (about one and a half turns) using the adjuster, which is stored at the base of the tip arm support block.

   Note: Remember the position of the quick release screw.

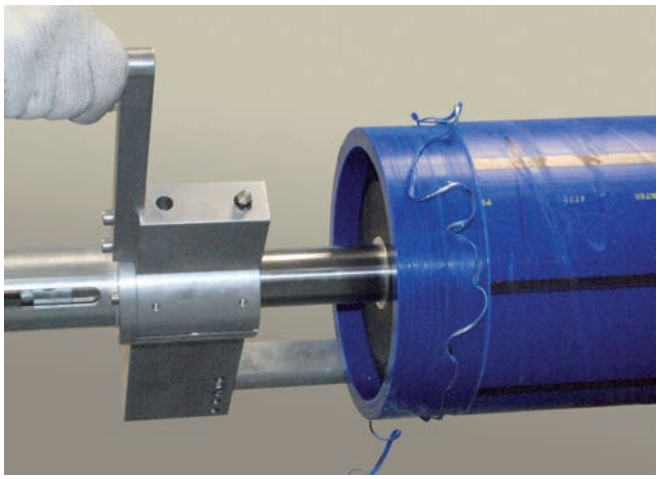


4. Ensure that the tip holder arm has been located in the hole corresponding to the pipe size in the tip holder support block.

   Locate the tool onto the mandrel shaft taking care not to damage the bore of the tool.

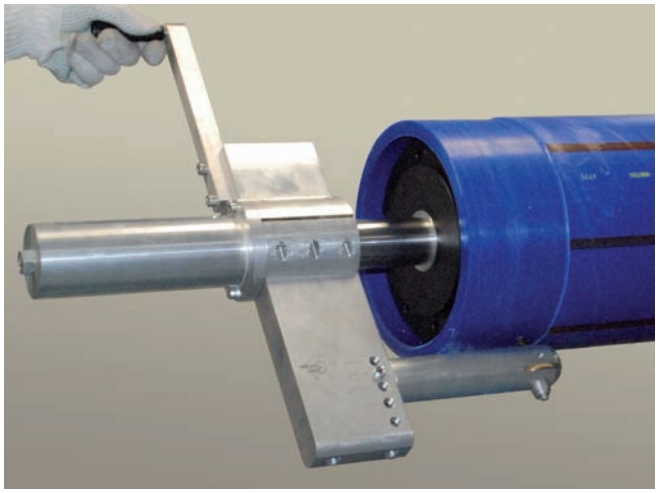
   Slowly slide the tool along the mandrel shaft using a twisting action, until the feed screw touches the quick release feed screw nut.

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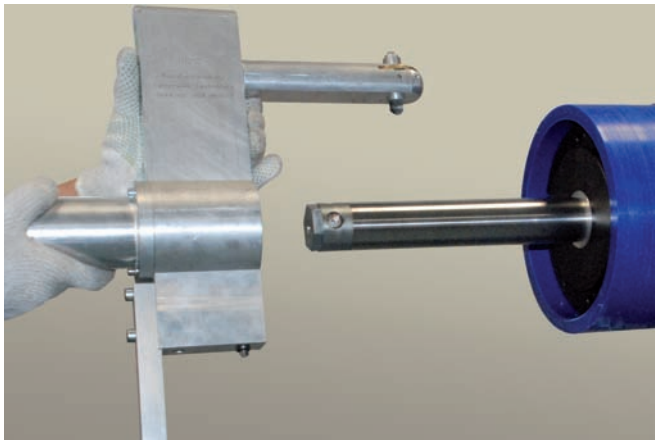
5. Taking care to avoid damaging the quick release nut and feed screw, rotate the tool in a clockwise direction with a slight force pushing forward.

   Once the feed screw has engaged with the quick release nut, it will now proceed to travel along the length of the mandrel shaft, removing the outer barrier layers and preparing the pipe for electrofusion jointing.



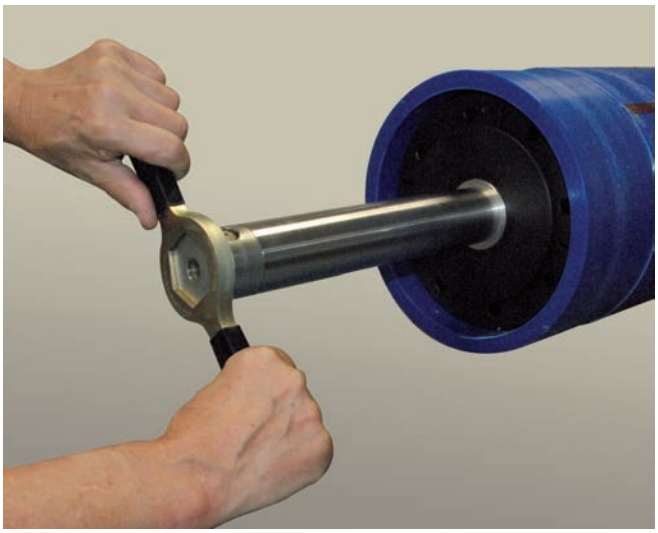
6. When the required length of pipe has been prepared, raise the quick release screw to its top position (about one and a half turns).

   The quick release screw can be accessed through the slot in the feed screw housing tube.

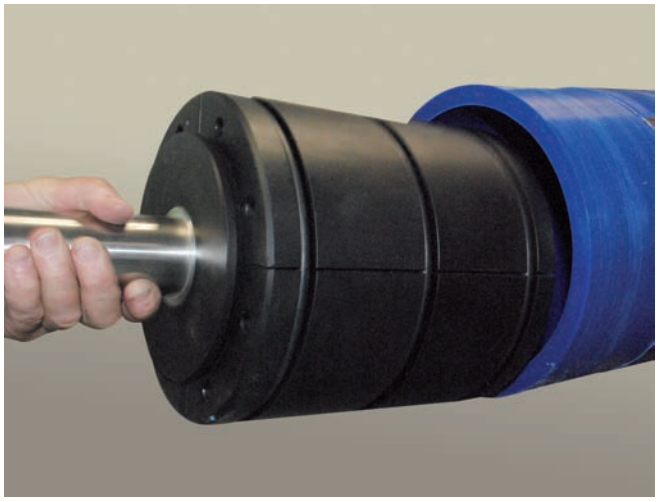


7. The tool can now be removed from the mandrel shaft.

   Note: The tool should be removed to a clean dry and safe area.



8. Loosen the collet using the mandrel spanner on the mandrel shaft in an anti-clockwise direction until free.



9. Remove the collet and mandrel from the pipe.

   The collet should be removed to a clean dry and safe area.

   If there are any areas of pipe that have not been prepared properly, then the hand scraper should be used to complete the preparation process.

   Note: The barrelling effect found at the end of the pipe may result in the barrier layers remaining on the pipe surface for a short distance in from the end of the pipe.

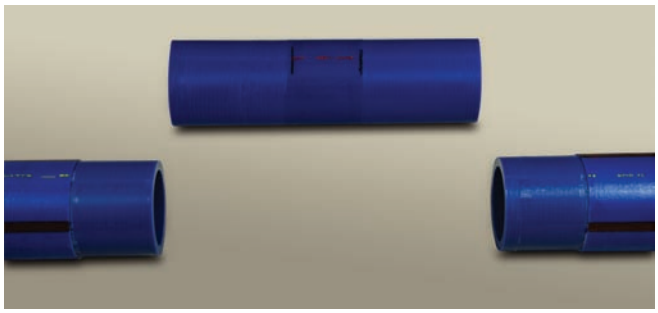
Repair Using Electrofusion (for Protecta-Line 225mm-355mm)

The pipe stops incorporated in the Protecta-Line or Durafuse couplers are shearable and have been provided for the specific purpose of using the fittings for making repairs or breaking into existing pipelines.

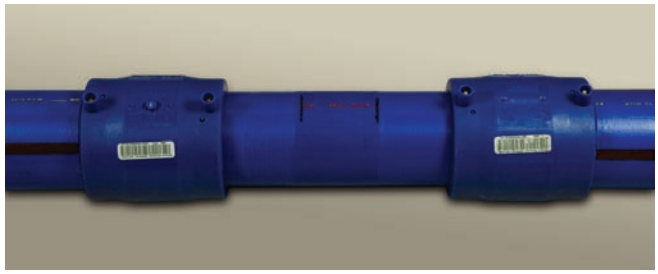
1. Cut out the damaged section of the Protecta-Line pipe at least four times the length of the electrofusion repair couplers and ensure the pipe ends are cut square.
2. Measure the distance between the exposed pipe ends and cut a length of plain PE100 pipe of the same diameter and wall thickness as the existing Protecta-Line pipe, equal to the measured distance less 10mm ensuring that the pipe ends are cut square
3. Clean the ends of the cut section of plain pipe, for a distance slightly greater than the overall length of the repair couplers.
4. Using the pipe end preparation tool, remove the entire surface of the pipe over the marked area, preferably as a continuous ribbon or strip. **Note: The use of mechanical end preparation tools is preferred as hand scraping requires great care and can be time-consuming especially on larger diameter pipes. It is essential that material is removed by scraping or peeling; scratching or abrading is not sufficient.**
5. Remove the pipe stops in the coupler. This can be most satisfactorily achieved by placing one end of a **thoroughly cleaned** short length of pipe into the coupler and striking the other end onto a hard surface. The pipe stops can also be removed using a sharp knife, but care must be taken not to damage the bore of the fitting.
6. Clean the ends of the Protecta-Line pipe for repair and prepare for electrofusion jointing using the Protecta-Line Suprep Scraper as described on pages 26 and 27.
7. Using a suitable marker pen, draw circumferential lines half the length of the repair coupler on the prepared Protecta-line pipe ends which will be used to indicate the location of each repair coupler prior to fusion.
8. Care should be taken to ensure any residual water in the mains is not allowed to come into contact with the electrofusion area.

9 Insert the new plain section of pipe with repair couplers and then slide the repair couplers onto the Protecta-Line pipe ends, ensuring that they are positioned up to the marks on the prepared Protecta-Line pipe ends. Ensure that the surfaces are clean and dry.

10. Carry out the electrofusion jointing procedure as described in the GPS Installation & Technical Guidelines brochure - GP-IT005.







Alternative Method

Alternatively, stub flange assemblies may be fitted to the ends of the Protecta-Line pipe (after preparation with the Protecta-Line Surprep Scraper) and then connected with a double flanged ductile iron spacer.



This method may be used where there is a risk of water in the pipe contaminating electrofusion joints during installation. Foam pigs can be used to temporarily seal the pipe bore. When electrofusion jointing of the stub flange assemblies has been completed, they can be removed before installation of the double flanged ductile iron spacer.

Squeeze-off of Protecta-Line pipe
Protecta-Line pipe can be squeezed off in the industry-approved way, as summarised in the GPS Installation and Technical Guidelines. However, as a precaution after re-rounding previously squeezed off areas should be wrapped with Protecta-Line aluminium tape followed by a proprietary waterproof petrolatum tape (equivalent to Denso™), in addition to any reinforcement bands that may be required to be fitted. For information on acceptable usage conditions refer to Table 9.2 in the WRc PE Pipe Systems Manual version 01/02.

When made in accordance with GPS PE Pipe Systems' recommended procedures, butt-fusion and electrofusion joints of the Protecta-Line system have been independently shown to meet the requirements of WIS 4-32-19 without any need for subsequent wrapping. This does not exempt installers from local regulations and the local Water Company preferences must be adhered to.

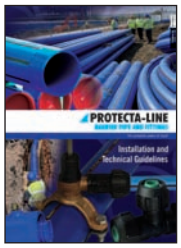
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FAX BACK

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Protecta-Line Installation and Technical Guidlines ☐



GP-IT005/2
Installation and Technical Guidlines ☐



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G0021/2
Protecta-Line Self-tapping Ferrule Off-takes ☐



GP-XF006
DuraFuse Excess Flow Valves ☐



G0010/1
DuraFuse Duck Foot Bends ☐



GP-SF004/1
SlimFlanges for Gas ☐



G0022
Protecta-Line Ferrule Off-takes ☐



G0025
Protecta-Line Traceability ☐



G0020
Large Diameter Pipe Systems ☐



LS001
Push-Fast System ☐

Name .....

Company name.....

Address.....

..... Postcode .....

Tel ..... Fax .....

Email.....

Fax: 01480 458829

Scan to view
Protecta-Line videos

GPS PE Pipe Systems reserve the right to modify products without prior notice, as part of its programme of continuous improvement.

The content of this publication is for general information only and it remains the users responsibility to determine the suitability of any product contained therein for the intended application.

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PE PIPE SYSTEMS

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Paper from responsible sources
FSC® C003256

GP-PT003/2 May 2011

an Aliaxis company



Plate 1 – Newton Le Willows Topsoil Source



Plate 2 – HP01 0.30m



Plate 3 – HP2 – 0.40m



Plate 4 – HP01 0.10m



Plate 5 – New Hotel Annex in Place of Public House



Plate 6 – New Hotel Annex in Place of Public House



Plate 7– New Hotel Annex in Place of Public House



Plate 8 – Existing Landscaping at Eastern Boundary. Mixture of Imported & Existing Topsoil



Plate 9 – Existing Landscaping at Northern Boundary. Mixture of Imported & Existing Topsoil



Plate 10 – Existing Landscaping at Northern Boundary. Mixture of Imported & Existing Topsoil



Plate 11 – Existing Landscaping at Northern Boundary. Mixture of Imported & Existing Topsoil



Plate 12 – Landscaping with Planting



Plate 13 – Landscaping Depth of Topsoil on Northern Boundary



Plate 14 – Landscaping Depth of Topsoil on Eastern Boundary



Plate 15 – Landscaping Strips with Imported Topsoil only on Southern Edge of Building

N	off site **Excavated material**	532	m3	reduce dig-foundations
J	off site **Excavated material**	105	m3	Manhole and drainage
D	off site **Excavated material**	185	m3	Attenuation tank
J	off site	553	m3	Externals-slab bases

N	sand	55	m3	sand to tank and paving	Imported between 11-8-26 and 18-8-26, 2-10-26 and 20-10-26
J	MOT	320	m3	tank/drainage/externals	Imported between 2-9-26 and 19-10-26
	Soil	36	m3	Landscape area	Imported between 9-10-26 and 22-10-26

Cheshire Soils and Aggregates LTD

Buyer and supplier of bulk topsoil
Suite 1, Unit 2 Edward Court, Altrincham Business Park,
George Richards Way, Altrincham WA14 5GL
Tel: 07813 130188 Email: ciaran@cheshiresoils.co.uk Web: www.cheshiresoils.co.uk

No: 1884

DUTY OF CARE: CONTROLLED WASTE TRANSFER NOTE

A — Description of the waste

1) Description of the waste being transferred: Spoil

List of Waste Regulations code(s): 17 . 05 . 04

2) How is the waste contained? ☑ Loose ☐ Sacks ☐ Skip ☐ Drum ☐ Other (Specify):

3) How much waste? For example: number of sacks, weight: Est 8 loads

4) Analysis attached / not attached / sent separately (delete as appropriate)

B — Producer / holder of the waste

Current holder of the waste - Transferrer: *By signing in Section D or F below 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* Yes ☐

1) Full name (print): J A JATES Construction

2) Company name, address and postcode: 819 Manchester Road Castleton Rochdale lancs

3) SIC code (2007): 41202

4) Which of the following are you? (please tick one or more boxes)

A ☑ Waste producer ☐ Waste importer ☐ Collection / disposal authority ☐ Broker

B ☐ Env Permit holder (ref. number): ☐ Registered waste carrier (ref. number):

C ☐ Waste exemption holder (exemption registration number):

D ☐ Exempt from carrier registration (give reason):

C — Carrier of the waste

1) Full Name (print): Ryans of Manchester

2) Company name, address and postcode: Yard 19 Sandfold lane Manchester M19 3BJ

3) SIC code (2007): 49410

4) Which of the following are you? (Tick one box)

A ☐ Waste collection authority:

B ☑ Registered waste carrier (ref. number): CBDU162986

C ☐ Exempt from carrier registration (give reason):

D — First transfer (holder to the carrier)

1) Place of transfer: New Premier Ltn Blackburn 2) Date of transfer: 2/12/26

3) Time(s) of transfer: Contact No:

(for multiple transfers give date range)

4) Name and address of broker arranging transfer (if applicable): Cheshire Soils + Aggregates Unit 2 Edward Court Altrincham Business Park

5) Holder's representatives — Carriers representatives

Name (print): Name (print):

Signed: Signed:

E — Disposer / recoverer of the waste

1) Full name (print): Cheshire Soils & Aggregates LTD

2) Company name, address and postcode: Aggregate Recycling Facility 40 Thomas Street Manchester M32 0JT

3) Which of the following are you? (Tick one box)

☑ Holder of an Environmental Permit (ref number): EPR/WE6444AC

☐ Holder of a valid waste exemption (ref number):

F — Second Transfer (carrier to disposer / recoverer)

1) Place of transfer: Thomas Street 2) Date of transfer: 2/12/26

3) Time(s) of transfer: Contact No:

(for multiple transfers give date range)

4) Name and address of broker arranging transfer (if applicable): Cheshire Soil + Aggregates Unit 2 Edward Court Altrincham Business Park

5) Holder's representatives — Disposer's / Recoverer's representatives

Name (print): Name (print): L PLACE

Signed: Signed: [redacted]

Producer's / Holder's Copy

This note must be retained by you and held for at least two years (or longer period specified in your Environmental Permit) from the date of the last transfer to which this note applies.

White - *Producer's copy* Yellow - *Carrier's copy* Pink - *Disposer's / recoverer's copy*

Cheshire Soils and Aggregates LTD

Buyer and supplier of bulk topsoil
Suite 1, Unit 2 Edward Court, Altrincham Business Park,
George Richards Way, Altrincham WA14 5GL
Tel: 07813 130188 Email: ciaran@cheshiresoils.co.uk Web: www.cheshiresoils.co.uk

No: 1898

DUTY OF CARE: CONTROLLED WASTE TRANSFER NOTE

A — Description of the waste

1) Description of the waste being transferred ..... Hardcore .....

List of Waste Regulations code(s): 17.01.07

2) How is the waste contained? ☒ Loose ☐ Sacks ☐ Skip ☐ Drum ☐ Other (Specify): .....

3) How much waste? For example: number of sacks, weight: ..... Est 1 load .....

4) Analysis attached / not attached / sent separately (delete as appropriate)

B — Producer / holder of the waste

Current holder of the waste - Transferrer: *By signing in Section D or F below 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* Yes ☐

1) Full name (print): ..... JA JAMES CONSTRUCTION .....

2) Company name, address and postcode: ..... 317 Manchester Road Castleton Rochdale OL11 2SG .....

3) SIC code (2007): 4 3 2 2 2

4) Which of the following are you? (please tick one or more boxes)

A ☒ Waste producer ☐ Waste importer ☐ Collection / disposal authority ☐ Broker

B ☐ Env Permit holder (ref. number): ..... ☐ Registered waste carrier (ref. number): .....

C ☐ Waste exemption holder (exemption registration number): .....

D ☐ Exempt from carrier registration (give reason): .....

C — Carrier of the waste

1) Full Name (print): ..... Ged Haulage .....

2) Company name, address and postcode: ..... 3 chapel Cottages Moorbrook Rd Culcheth SK8 5NT .....

3) SIC code (2007): 4 9 4 1 0

4) Which of the following are you? (Tick one box)

A ☐ Waste collection authority: .....

B ☒ Registered waste carrier (ref. number): CBDU 257307

C ☐ Exempt from carrier registration (give reason): .....

D — First transfer (holder to the carrier)

1) Place of transfer: New Barn Farm Daresbury ..... 2) Date of transfer: 13/12/16 .....

3) Time(s) of transfer: ..... Contact No: .....

(for multiple transfers give date range) .....

4) Name and address of broker arranging transfer (if applicable): Cheshire Soils + Aggregates Unit 2 Edward Court Altrincham business Park.

5) Holder's representatives — Carriers representatives

Name (print): ..... Name (print): .....

Signed: ..... Signed: .....

E — Disposer / recoverer of the waste

1) Full name (print): ..... Cheshire Soils + Aggregates LTD .....

2) Company name, address and postcode: ..... Aggregate Recycling Facility 40 Thorns Street Manchester M32 0JT .....

3) Which of the following are you? (Tick one box)

☒ Holder of an Environmental Permit (ref number): ..... EPR/WE6441AC .....

☐ Holder of a valid waste exemption (ref number): .....

F — Second Transfer (carrier to disposer / recoverer)

1) Place of transfer: ..... Thorns Street ..... 2) Date of transfer: 13/12/16 .....

3) Time(s) of transfer: ..... Contact No: .....

(for multiple transfers give date range) .....

4) Name and address of broker arranging transfer (if applicable): Cheshire Soils + Aggregates Unit 2 Edward Court Altrincham business Park

5) Holder's representatives — Disposer's / Recoverer's representatives

Name (print): ..... Name (print): .....

Signed: ..... Signed: .....

[redacted]

Producer's / Holder's Copy

This note must be retained by you and held for at least two years (or longer period specified in your Environmental Permit) from the date of the last transfer to which this note applies.

White - *Producer's copy* Yellow - *Carrier's copy* Pink - *Disposer's / recoverer's copy*

Certificate of Registration under the Waste (England and Wales) Regulations 2011

Regulation authority

Name	Environment Agency
Address	National Customer Contact Centre 99 Parkway Avenue Sheffield S9 4WF
Telephone number	03708 506506

The Environment Agency certify that the following information is entered in the register which they maintain under regulation 28 of the Waste (England and Wales) Regulations 2011.

Carriers details

Name of registered carrier	J. A. YATES CONSTRUCTION LIMITED
Registered as	An upper tier waste carrier, broker and dealer
Registration number	CBDU441701
Address of place of business	J A YATES CONSTRUCTION LTD 819 MANCHESTER ROAD ROCHDALE OL11 3AH
Date of registration	20 May 2025
Expiry date of registration (unless revoked)	16 June 2028

This certificate was created on 29 May 2025. These details are correct at the time of certificate generation.

This copy has been issued under Regulation 6 of Waste (England and Wales) Amendment Act 2014 by the Environment Agency. This is copy number 1 of the certificate.

Making changes to your registration

Your registration will last 3 years and will need to be renewed after this period. If any of your details change, you must notify us within 28 days of the change.

61 Mosley Road
Trafford Park
Manchester
M17 1GJ

P. P. O'CONNOR
Committed To Excellence

www.ppoconnor.co.uk
salesledger@ppoconnor.co.uk

WASTE CARRIERS LICENCE NO: CBDU101751

CONVEYANCE NOTE / PROOF OF DELIVERY

TICKET NO:	**258523**	**DATE:**	20-Oct-2026
CUSTOMER:	J.A Yates Construction Ltd	**DEPOT:**	P249
DELIVERY/COLLECTION ADDRESS: Premier inn, off Barlow moor road, Didsbury M21 7QS		**ORDER NO:**	
		HAULIER:	PP O'CONNOR GROUP LIMITED
		VEHICLE REG:	MK21 BZO
		SITE CONTACT:	ANDY

PRODUCT DESCRIPTION	**QUANTITY**	
Topsoil BS3882:2015	**GROSS WEIGHT**	32,000
	TARE WEIGHT	12,300
	NET WEIGHT	19,700

TIME ARRIVED ONSITE:	11:26	**CASH CUSTOMER:**
TIME FINISHED ONSITE:	11:36	
WAITING TIME/DAYWORK:	10.00	**DRIVER NAME:** MATHEW SIMS

SIGNED ON BEHALF OF THE CUSTOMER, I ACKNOWLEDGE THE DETAILS ON THIS TICKET AS CORRECT AND ARE SUBJECT TO OUR CONDITIONS OF SALE

PRINT NAME: P Appleton **CUSTOMER SIGNATURE:** [redacted]

ALL RECYCLED PRODUCTS ARE PRODUCED IN COMPLIANCE WITH THE WRAP QUALITY PROTOCOL.
THIS MATERIAL IS SOLD SUBJECT TO THE TERMS AND CONDITIONS AS SHOW ON YOUR QUOTATION.
ALL VEHICLES ENTER CUSTOMERS PROPERTY AT CUSTOMER'S RISK. ALL GOODS ARE CARRIED SUBJECT TO RHA CONDITIONS OF ARRIAGE 1998. COPY AVAILABLE ON REQUEST.

819 Manchester Road, Castleton
Rochdale, Lancashire OL11 3AH
Tel: 01706 526265
Fax: 01706 526261

CONVEYANCE NOTE 3380

Date	Vehicle Reg	Driver
6/10/26	MV 67 DFE	P.S

Customer: T H Yates

Site Address: Prem Inn Didsbury Post code

Material Type Collected:

Material Type Delivered: 1 x 8 w mot

Quantity:

Site Signature: [redacted]

Site Print:

Comments:

White copy: Cutomer Pink copy: Office Yellow copy: Office Blue copy: Fast in book

61 Mosley Road
Trafford Park
Manchester
M17 1GJ

Tel: 0161 778 0333

www.ppoconnor.co.uk
salesledger@ppoconnor.co.uk

P. P. O'CONNOR
Committed To Excellence

WASTE CARRIERS LICENCE NO: CBDU101751

CONVEYANCE NOTE / PROOF OF DELIVERY

TICKET NO:	**238351**	**DATE:**	28-Jul-2026
CUSTOMER:	J.A Yates Construction Ltd	**DEPOT:**	P01

DELIVERY/COLLECTION ADDRESS

Premier inn, off Barlow moor road, Didsbury
M21 7QS

ORDER NO:	
HAULIER:	PP O'Connor Plant Ltd
VEHICLE REG:	MV25 EXG
SITE CONTACT:	ANDY

PRODUCT DESCRIPTION	**QUANTITY**	
Sand	**GROSS WEIGHT**	31,950
	TARE WEIGHT	12,200
	NET WEIGHT	19,750

TIME ARRIVED ONSITE:	14:56
TIME FINISHED ONSITE:	15:08
WAITING TIME/DAYWORK:	12.00

CASH CUSTOMER:

DRIVER SIGNATUR [redacted]

DRIVER NAME: DARREN WILLIAMS

SIGNED ON BEHALF OF [redacted] **ICKET AS CORRECT AND ARE SUBJECT TO OUR CONDITIONS OF SALE**

PRINT NAME: P Lomax

CUSTOMER SIGNATURE: [redacted]

ALL RECYCLED PRODUCTS ARE PRODUCED IN COMPLIANCE WITH THE

THIS MATERIAL IS SOLD SUBJECT TO THE TERMS AND CONDITIONS AS SHOW ON YOUR QUOTATION.
ALL VEHICLES ENTER CUSTOMERS PROPERTY AT CUSTOMER'S RISK. ALL GOODS ARE CARRIED SUBJECT TO RHA CONDITIONS OF ARRIAGE 1998. COPY AVAILABLE ON REQUEST.

Cheshire Soils and Aggregates LTD

Collection / Delivery Note

Buyer and supplier of bulk topsoil

Suite 1, Unit 2, Edward Court, Altrincham Business Park,
George Richards Way, Altrincham, WA14 5GL
Tel: 07813 130188
Email: ciaran@cheshiresoils.co.uk
Web: www.cheshiresoils.co.uk

No: 442291

Date: 2/2/26

Customer: A J YATES

Driver's Name: ED

Job Location: DERWENT AVE

Vehicle Reg: YD20 ONZ

Material:	Weight:	Tonnes:	Kg:	Tonnes (1000 kilos):	Metric:
	Gross:	1X8W SPOIL AWAY			
	Tare:				
	Net:				

Daywork: Hours Worked:

Consignee Signature: [redacted] Time:

Print Name: P Appleyard

Conditions of Sale: it is essential that all written particulars entered above should be carefully checked by the consignee since this delivery note, once signed by the consignee represents formal acceptance of the material in good order and condition and subsequent complaints cannot be accepted. All complaints whether in respect of material or circumstance of delivery must be made to the driver of the vehicle and confirmed in writing direct to the company immediately.

Cheshire Soils and Aggregates LTD

Collection / Delivery Note

Buyer and supplier of bulk topsoil

Suite 1, Unit 2, Edward Court, Altrincham Business Park,
George Richards Way, Altrincham, WA14 5GL
Tel: 07813 130188
Email: ciaran@cheshiresoils.co.uk
Web: www.cheshiresoils.co.uk

No: 442293

Date: 2/2/26

Customer: A J YATES

Driver's Name: ED

Job Location: DERWENT AVE

Vehicle Reg: YD20 ONZ

Material:	Weight:	Tonnes:	Kg:	Tonnes (1000 kilos):	Metric:
	Gross:	1X8W LOAD SPOIL AWAY			
	Tare:				
	Net:				

Daywork: Hours Worked:

Consignee Signa[redacted] Time: 10:45

Print Name: [illegible]

Conditions of Sale: it is essential that all written particulars entered above should be carefully checked by the consignee since this delivery note, once signed by the consignee represents formal acceptance of the material in good order and condition and subsequent complaints cannot be accepted. All complaints whether in respect of material or circumstance of delivery must be made to the driver of the vehicle and confirmed in writing direct to the company immediately.

Cheshire Soils and Aggregates LTD

Collection / Delivery Note

Buyer and supplier of bulk topsoil

Suite 1, Unit 2, Edward Court, Altrincham Business Park,
George Richards Way, Altrincham, WA14 5GL
Tel: 07813 130188
Email: ciaran@cheshiresoils.co.uk
Web: www.cheshiresoils.co.uk

No: 442287

Date: 2/2/26

Customer: A J YATES

Driver's Name: ED

Job Location: DERWENT AVE

Vehicle Reg: YD20 ONZ

Material:	Weight:	Tonnes:	Kg:	Tonnes (1000 kilos):	Metric:
	Gross:	1X8W LOAD SPOIL AWAY			
	Tare:				
	Net:				

Daywork: Hours Worked:

Consignee Signat [redacted] Time: 8:00

Print Name: Josh Bamber

Conditions of Sale: it is essential that all written particulars entered above should be carefully checked by the consignee since this delivery note, once signed by the consignee represents formal acceptance of the material in good order and condition and subsequent complaints cannot be accepted. All complaints whether in respect of material or circumstance of delivery must be made to the driver of the vehicle and confirmed in writing direct to the company immediately.

Cheshire Soils and Aggregates LTD

Collection / Delivery Note

Buyer and supplier of bulk topsoil

Suite 1, Unit 2, Edward Court, Altrincham Business Park,
George Richards Way, Altrincham, WA14 5GL
Tel: 07813 130188
Email: ciaran@cheshiresoils.co.uk
Web: www.cheshiresoils.co.uk

No: 442289

Date: 2/2/26

Customer: A J YATES

Driver's Name: ED

Job Location: DERWENT AVE

Vehicle Reg: YD20 ONZ

Material:	Weight:	Tonnes:	Kg:	Tonnes (1000 kilos):	Metric:
	Gross:	1X8W LOAD SPOIL AWAY			
	Tare:				
	Net:				

Daywork: Hours Worked:

Consignee Signa [redacted] Time: 9:00

Print Name: Josh Bamber

Conditions of Sale: it is essential that all written particulars entered above should be carefully checked by the consignee since this delivery note, once signed by the consignee represents formal acceptance of the material in good order and condition and subsequent complaints cannot be accepted. All complaints whether in respect of material or circumstance of delivery must be made to the driver of the vehicle and confirmed in writing direct to the company immediately.

819 Manchester Road, Castleton
Rochdale, Lancashire OL11 3AH
Tel: 01706 526265
Fax: 01706 526261

CONVEYANCE NOTE 2910

Date	Vehicle Reg	Driver
2/2/26	MV18 CJE	Tom

Customer: J A Yates

Site Address: Prem Inn Didsbury Post code

Material Type Collected: 1 x 8w spoil

Material Type Delivered:

Quantity:

Site Signature: [redacted]

Site Print: Gotom.

Comments:

White copy: Cutomer Pink copy: Office Yellow copy: Office Blue copy: Fast in book

819 Manchester Road, Castleton
Rochdale, Lancashire OL11 3AH
Tel: 01706 526265
Fax: 01706 526261

CONVEYANCE NOTE 2912

Date	Vehicle Reg	Driver
2/2/26	MV18 CJE	Tom

Customer: J A Yates

Site Address: Prem Inn Didsbury Post code

Material Type Collected: 1 x 8w spoil

Material Type Delivered:

Quantity:

Site Signature: [redacted]

Site Print: P Apple

Comments:

White copy: Cutomer Pink copy: Office Yellow copy: Office Blue copy: Fast in book

SKY PLANT HIRE LTD

819 Manchester Road, Castleton
Rochdale, Lancashire OL11 3AH
Tel: 01706 526265
Fax: 01706 526261

CONVEYANCE NOTE

2908

Date	Vehicle Reg	Driver
2/2/26	MV18 AJE	PCS

Customer:	J A Yates
Site Address:	Prem Inn Didsbury Post code
Material Type Collected:	1 x 8 w Spoil
Material Type Delivered:	
Quantity:	
Site Signature:	[redacted]
Site Print:	Geo Tom.
Comments:	

White copy: Cutomer Pink copy: Office Yellow copy: Office Blue copy: Fast in book

819 Manchester Road, Castleton
Rochdale, Lancashire OL11 3AH
Tel: 01706 526265
Fax: 01706 526261

CONVEYANCE NOTE 3381

Date	Vehicle Reg	Driver
6/10/20	MV67DFE	A.S

Customer: JA Yates

Site Address: Premtrn Didsbury Post code

Material Type Collected: 1x Sw Spoil

Material Type Delivered:

Quantity:

Site Signature: [redacted]

Site Print:

Comments:

White copy: Cutomer Pink copy: Office Yellow copy: Office Blue copy: Fast in book

Certificate of Analysis

Certificate Number	26-01085	*Issued:*	17-Feb-26

Client Terra Tek Limited
Unit 1
Mitchells Enterprise Centre
Bradberry Balk Ln
Wombwell
Barnsley
S73 8HR

Our Reference 26-01085

Client Reference ~ P2600035

Order No ~ (not supplied)

Contract Title ~ Newton Le Windows

Description 6 Soil samples.

Date Received 20-Jan-26

Date Started 20-Jan-26

Date Completed 17-Feb-26

Test Procedures Identified by prefix DETSn (details on request).

Notes Opinions and interpretations are outside the laboratory's scope of ISO 17025 accreditation. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.

Approved By [redacted]
Louise Cook
Contracts Manager

2139

Sample Deviations present. See Deviation Table Section for details.

Summary of Chemical Analysis
Soil Samples

Our Ref 26-01085
Client Ref ~ P2600035
Contract Title ~ Newton Le Windows

	Lab No	2627428	2627429	2627430	2627431	2627432	2627433
	Sample ID ~	Stockpile 1	Stockpile 1	Stockpile 1	Subsoil Stockpile 2/3	Subsoil Stockpile 2/3	Subsoil Stockpile 2/3
	Depth ~						
	Other ID ~	Sample 1	Sample 2	Sample 3	Sample 1	Sample 2	Sample 3
	Sample Type ~	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sampling Date ~	16/01/2026	16/01/2026	16/01/2026	16/01/2026	16/01/2026	16/01/2026
	Sampling Time ~	1200	1200	1200	1200	1200	1200
Test	**Method**	**LOD**	**Units**				
Metals							
Arsenic	DETSC 2301#	0.2	mg/kg	14	15	14	4.2	5.1	10
Boron, Water Soluble (2.5:1)	DETSC 2311#	0.2	mg/kg	0.2	0.4	0.4	< 0.2	< 0.2	< 0.2
Cadmium	DETSC 2301#	0.1	mg/kg	0.3	0.4	0.3	< 0.1	< 0.1	< 0.1
Chromium	DETSC 2301#	0.15	mg/kg	18	18	17	12	14	17
Copper	DETSC 2301#	0.2	mg/kg	56	62	64	14	12	13
Lead	DETSC 2301#	0.3	mg/kg	84	86	82	9.9	13	14
Mercury	DETSC 2325#	0.05	mg/kg	0.24	0.21	0.19	< 0.05	< 0.05	< 0.05
Nickel	DETSC 2301#	1	mg/kg	19	20	19	10	11	13
Selenium	DETSC 2301#	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5	0.6	< 0.5
Zinc	DETSC 2301#	1	mg/kg	98	99	93	30	29	39
Inorganics									
Soil Density	DETSC 2019*	0.1	g/ml	1.46	1.31	1.38			
Conductivity, Calcium Sulphate Extractable	DETSC 2009*	1	uS/cm	2000	1900	1900			
pH	DETSC 2008#		pH	7.2	7.8	7.0	7.2	7.4	8.5
Cyanide, Total	DETSC 2130#	0.1	mg/kg	0.1	0.1	0.1	< 0.1	< 0.1	< 0.1
Organic matter	DETSC 2002#	0.1	%	0.9	4.1	3.9	1.2	1.4	0.7
Carbonate (as CO3)	DETSC 2005	1.4	%	< 1.4	< 1.4	< 1.4			
Kjeldahl Nitrogen, Total	DETSC 2121*	0.01	%	0.80	0.96	0.90			
Sulphide	DETSC 2024*	10	mg/kg	36	12	< 10	16	12	< 10
Sulphate as SO4, Total	DETSC 2321#	0.01	%	0.05	0.06	0.05	0.03	0.02	0.03
Petroleum Hydrocarbons									
Aliphatic C5-C6	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aliphatic C6-C8	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aliphatic C8-C10	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aliphatic C10-C12	DETSC 3072#	1.5	mg/kg	< 1.5	< 1.5	< 1.5	< 1.5	< 1.5	< 1.5
Aliphatic C12-C16	DETSC 3072#	1.2	mg/kg	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2
Aliphatic C16-C21	DETSC 3072#	1.5	mg/kg	< 1.5	< 1.5	< 1.5	< 1.5	< 1.5	< 1.5
Aliphatic C21-C35	DETSC 3072#	3.4	mg/kg	< 3.4	< 3.4	< 3.4	< 3.4	< 3.4	< 3.4
Aliphatic C5-C35	DETSC 3072*	10	mg/kg	< 10	< 10	< 10	< 10	< 10	< 10
Aromatic C5-C7	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aromatic C7-C8	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aromatic C8-C10	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aromatic C10-C12	DETSC 3072#	0.9	mg/kg	< 0.9	< 0.9	< 0.9	< 0.9	< 0.9	< 0.9
Aromatic C12-C16	DETSC 3072#	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Aromatic C16-C21	DETSC 3072#	0.6	mg/kg	< 0.6	< 0.6	< 0.6	< 0.6	< 0.6	< 0.6
Aromatic C21-C35	DETSC 3072#	1.4	mg/kg	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4
Aromatic C5-C35	DETSC 3072*	10	mg/kg	< 10	< 10	< 10	< 10	< 10	< 10
TPH Ali/Aro Total C5-C35	DETSC 3072*	10	mg/kg	< 10	< 10	< 10	< 10	< 10	< 10

Summary of Chemical Analysis
Soil Samples

Our Ref 26-01085
Client Ref ~ P2600035
Contract Title ~ Newton Le Windows

			Lab No	2627428	2627429	2627430	2627431	2627432	2627433
			Sample ID ~	Stockpile 1	Stockpile 1	Stockpile 1	Subsoil Stockpile 2/3	Subsoil Stockpile 2/3	Subsoil Stockpile 2/3
			Depth ~						
			Other ID ~	Sample 1	Sample 2	Sample 3	Sample 1	Sample 2	Sample 3
			Sample Type ~	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
			Sampling Date ~	16/01/2026	16/01/2026	16/01/2026	16/01/2026	16/01/2026	16/01/2026
			Sampling Time ~	1200	1200	1200	1200	1200	1200
Test	**Method**	**LOD**	**Units**						
Benzene	DETSC 3321#	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Ethylbenzene	DETSC 3321#	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Toluene	DETSC 3321#	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Xylene	DETSC 3321#	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
PAHs									
Naphthalene	DETSC 3301	0.1	mg/kg	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthylene	DETSC 3301	0.1	mg/kg	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthene	DETSC 3301	0.1	mg/kg	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Fluorene	DETSC 3301	0.1	mg/kg	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Phenanthrene	DETSC 3301	0.1	mg/kg	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Anthracene	DETSC 3301	0.1	mg/kg	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Fluoranthene	DETSC 3301	0.1	mg/kg	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Pyrene	DETSC 3301	0.1	mg/kg	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo(a)anthracene	DETSC 3301	0.1	mg/kg	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Chrysene	DETSC 3301	0.1	mg/kg	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo(b)fluoranthene	DETSC 3301	0.1	mg/kg	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo(k)fluoranthene	DETSC 3301	0.1	mg/kg	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo(a)pyrene	DETSC 3301	0.1	mg/kg	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Indeno(1,2,3-c,d)pyrene	DETSC 3301	0.1	mg/kg	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Dibenzo(a,h)anthracene	DETSC 3301	0.1	mg/kg	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo(g,h,i)perylene	DETSC 3301	0.1	mg/kg	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
PAH 16 Total	DETSC 3301	1.6	mg/kg	< 1.6	< 1.6	< 1.6	< 1.6	< 1.6	< 1.6
Phenols									
Phenol - Monohydric	DETSC 2130#	0.3	mg/kg	0.5	0.5	0.4	< 0.3	< 0.3	< 0.3

Topsoil
Analytical Report

Our Ref 26-01085
Client Ref ~ P2600035
Contract Title ~ Newton Le Windows

Lab No	2627428
Sample ID ~	Stockpile 1
Depth ~	
Other ID ~	Sample 1
Sample Type ~	SOIL
Sampling Date ~	16/01/2026
Sampling Time ~	1200

Parameter	Method	Result	Compliant with multi purpose range? (Y/N)	Compliant with specific purpose range? (Y/N)				
				Acid.	Calc	Low F.	Low F. acidic	Low F. calc.
Texture								
Clay content %	$	0	See Figure 1 on Textural class sheet					
Silt content %	$	42						
Sand content %	$	58						
Soil texture – (see figure 1)	$	Sandy Loam						
Soil organic matter content % (varying with clay content)								
Clay 5-20%	DETSC 2002#	0.9	N	N	N	N	N	N
Clay 20-35%	DETSC 2002#		N/A	N/A	N/A	N/A	N/A	N/A
Maximum coarse fragment - Content % m/m								
>2 mm	$	8	Y	Y	Y	Y	Y	Y
>20 mm	$	3	Y	Y	Y	Y	Y	Y
>50 mm	$	0	Y	Y	Y	Y	Y	Y
Soil pH value	DETSC 2008#	7.2	Y	N	N	Y	N	N
Carbonate (Calcareous only) %	DETSC 2005	0	N/A	N/A	N	N/A	N/A	N
Available plant nutrient content								
Total Nitrogen %	DETSC 2121*	0.8	Y	Y	Y	N/A	N/A	N/A
Extractable phosphate mg/l	DETSC 2310*	119.7	Y	Y	Y	N	N	N
Extractable potassium mg/l	DETSC 2309*	335.8	Y	Y	Y	N/A	N/A	N/A
Extractable magnesium mg/l	DETSC 2309*	262.8	Y	Y	Y	N/A	N/A	N/A
Carbon: Nitrogen ratio		0.65	Y	Y	Y	Y	Y	Y
Electrical Conductivity	DETSC 2009*	2000	Y	N/A	N/A	N/A	N/A	N/A
Phytotoxic contaminants (by soil pH) mg/kgDS								
Zinc (Nitric acid extract)	DETSC 2308*	115.3	Y	Y	Y	Y	Y	Y
Copper (Nitric acid extract)	DETSC 2308*	68.6	Y	Y	Y	Y	Y	Y
Nickel (Nitric acid extract)	DETSC 2308*	21.9	Y	Y	Y	Y	Y	Y
Visible contaminants % m/m								
>2 mm	*	0	Y	Y	Y	Y	Y	Y
...of which plastics	*	0	Y	Y	Y	Y	Y	Y
...man made sharps	*	0	Y	Y	Y	Y	Y	Y

Additional analytical certificate(s) for particle size distribution analysis are appended.

- MCERTS (accred. only implied if report carries the MCERTS logo). * - unaccredited test. $ - completed by approved subcontractor.

Textural Class

Our Ref 26-01085
Client Ref ~ P2600035
Contract Title ~ Newton Le Windows

Results: Proportion in class (%)			
Clay	**Silt**	**Sand**	**Help messages**
0	42	58	

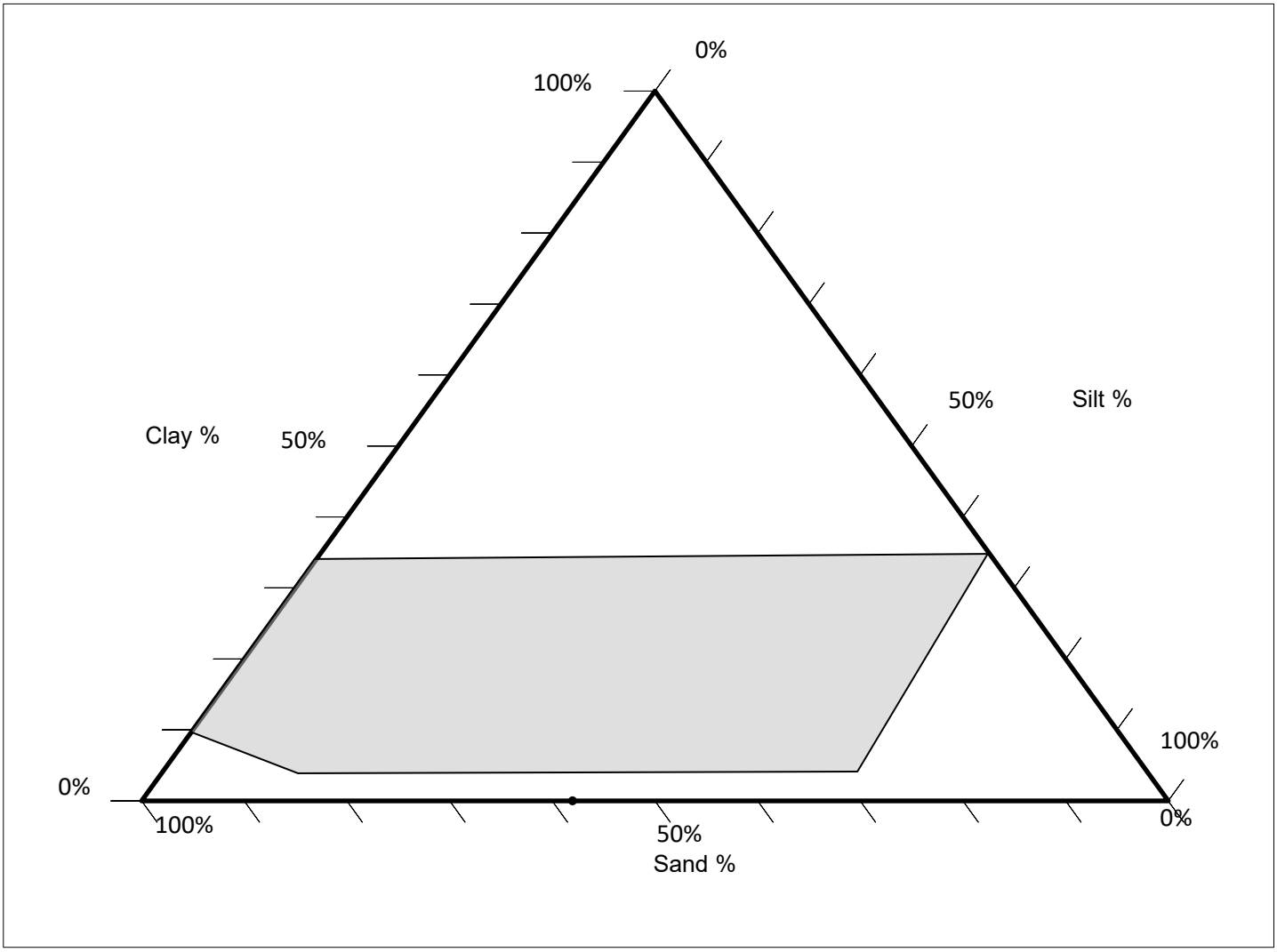


Figure 1
The textural class is required to be in the shaded area.
Results are shown by the grey point in the chart

Plotting parameters		Help messages
Printer correction:	1.1	
Tick interval (0 - 0.5):	0.1	
Tick length (0 - 0.2):	0.03	
Plot lines? (Y or N):	n	

Symbol key at end of report

Topsoil
Analytical Report

Our Ref 26-01085
Client Ref ~ P2600035
Contract Title ~ Newton Le Windows

Lab No	2627429
Sample ID ~	Stockpile 1
Depth ~	
Other ID ~	Sample 2
Sample Type ~	SOIL
Sampling Date ~	16/01/2026
Sampling Time ~	1200

Parameter	Method	Result	Compliant with multi purpose range? (Y/N)	Compliant with specific purpose range? (Y/N)				
				Acid.	Calc	Low F.	Low F. acidic	Low F. calc.
Texture								
Clay content %	$	0	See Figure 1 on Textural class sheet					
Silt content %	$	43						
Sand content %	$	57						
Soil texture – (see figure 1)	$	Sandy Loam						
Soil organic matter content % (varying with clay content)								
Clay 5-20%	DETSC 2002#	4.1	Y	Y	Y	Y	Y	Y
Clay 20-35%	DETSC 2002#		N/A	N/A	N/A	N/A	N/A	N/A
Maximum coarse fragment - Content % m/m								
>2 mm	$	4	Y	Y	Y	Y	Y	Y
>20 mm	$	0	Y	Y	Y	Y	Y	Y
>50 mm	$	0	Y	Y	Y	Y	Y	Y
Soil pH value	DETSC 2008#	7.8	Y	N	Y	Y	N	Y
Carbonate (Calcareous only) %	DETSC 2005	0	N/A	N/A	N	N/A	N/A	N
Available plant nutrient content								
Total Nitrogen %	DETSC 2121*	0.96	Y	Y	Y	N/A	N/A	N/A
Extractable phosphate mg/l	DETSC 2310*	81.2	Y	Y	Y	N	N	N
Extractable potassium mg/l	DETSC 2309*	170.3	Y	Y	Y	N/A	N/A	N/A
Extractable magnesium mg/l	DETSC 2309*	183.4	Y	Y	Y	N/A	N/A	N/A
Carbon: Nitrogen ratio		2.48	Y	Y	Y	Y	Y	Y
Electrical Conductivity	DETSC 2009*	1900	Y	N/A	N/A	N/A	N/A	N/A
Phytotoxic contaminants (by soil pH) mg/kgDS								
Zinc (Nitric acid extract)	DETSC 2308*	99.6	Y	Y	Y	Y	Y	Y
Copper (Nitric acid extract)	DETSC 2308*	62.9	Y	Y	Y	Y	Y	Y
Nickel (Nitric acid extract)	DETSC 2308*	18.3	Y	Y	Y	Y	Y	Y
Visible contaminants % m/m								
>2 mm	*	0	Y	Y	Y	Y	Y	Y
...of which plastics	*	0	Y	Y	Y	Y	Y	Y
...man made sharps	*	0	Y	Y	Y	Y	Y	Y

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Textural Class

Our Ref 26-01085
Client Ref ~ P2600035
Contract Title ~ Newton Le Windows

Results: Proportion in class (%)			
Clay	**Silt**	**Sand**	**Help messages**
0	43	57	

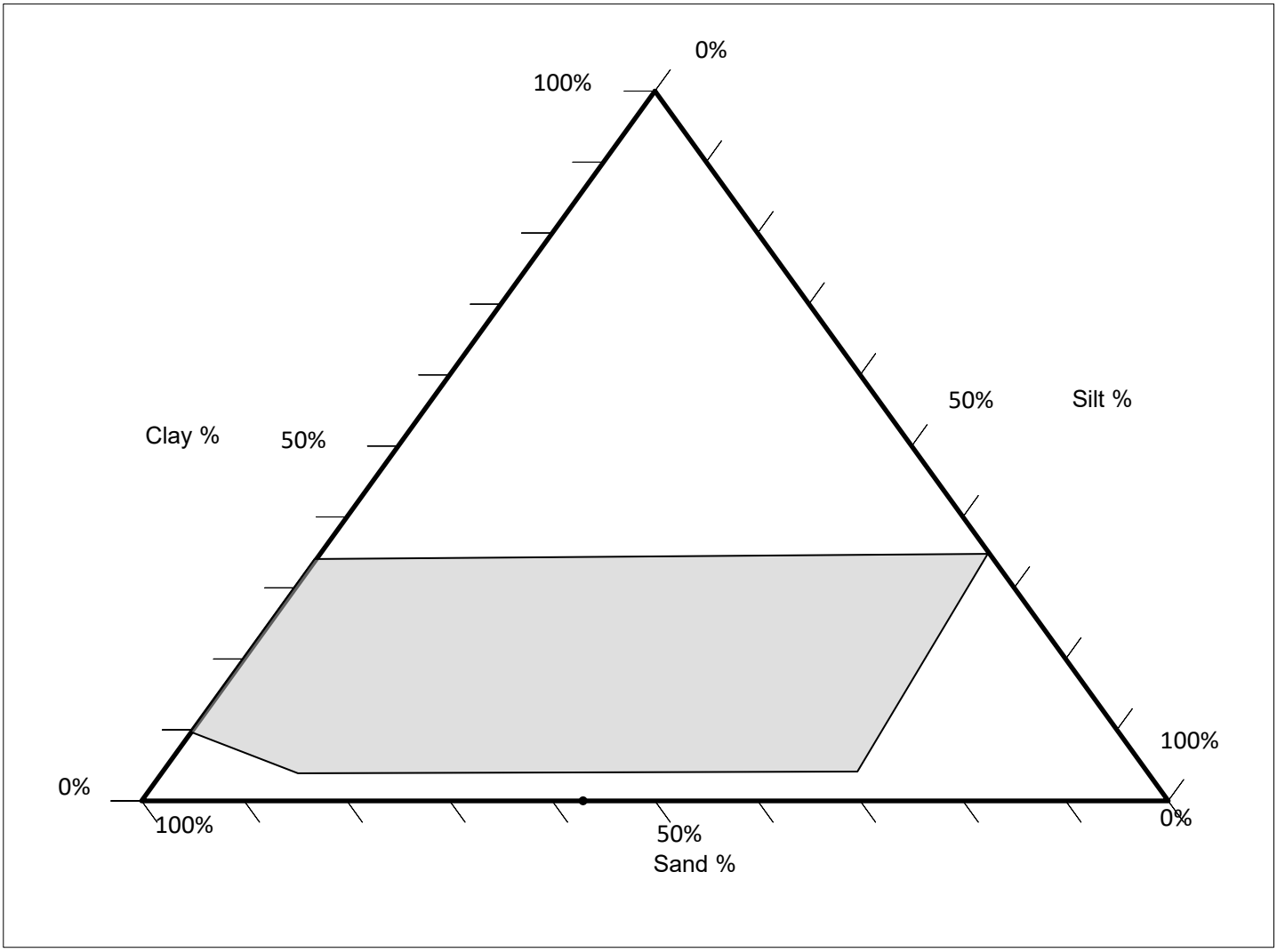


Figure 1
The textural class is required to be in the shaded area.
Results are shown by the grey point in the chart

Plotting parameters		Help messages
Printer correction:	1.1	
Tick interval (0 - 0.5):	0.1	
Tick length (0 - 0.2):	0.03	
Plot lines? (Y or N):	n	

Topsoil
Analytical Report

Our Ref 26-01085
Client Ref ~ P2600035
Contract Title ~ Newton Le Windows

Lab No	2627430
Sample ID ~	Stockpile 1
Depth ~	
Other ID ~	Sample 3
Sample Type ~	SOIL
Sampling Date ~	16/01/2026
Sampling Time ~	1200

Parameter	Method	Result	Compliant with multi purpose range? (Y/N)	Compliant with specific purpose range? (Y/N)				
				Acid.	Calc	Low F.	Low F. acidic	Low F. calc.
Texture								
Clay content %	$	0	See Figure 1 on Textural class sheet					
Silt content %	$	43						
Sand content %	$	57						
Soil texture – (see figure 1)	$	Sandy Loam						
Soil organic matter content % (varying with clay content)								
Clay 5-20%	DETSC 2002#	3.9	Y	Y	Y	Y	Y	Y
Clay 20-35%	DETSC 2002#		N/A	N/A	N/A	N/A	N/A	N/A
Maximum coarse fragment - Content % m/m								
>2 mm	$	4	Y	Y	Y	Y	Y	Y
>20 mm	$	0	Y	Y	Y	Y	Y	Y
>50 mm	$	0	Y	Y	Y	Y	Y	Y
Soil pH value	DETSC 2008#	7	Y	N	N	Y	N	N
Carbonate (Calcareous only) %	DETSC 2005	0	N/A	N/A	N	N/A	N/A	N
Available plant nutrient content								
Total Nitrogen %	DETSC 2121*	0.9	Y	Y	Y	N/A	N/A	N/A
Extractable phosphate mg/l	DETSC 2310*	151.8	N	N	N	N	N	N
Extractable potassium mg/l	DETSC 2309*	220.8	Y	Y	Y	N/A	N/A	N/A
Extractable magnesium mg/l	DETSC 2309*	234.6	Y	Y	Y	N/A	N/A	N/A
Carbon: Nitrogen ratio		2.51	Y	Y	Y	Y	Y	Y
Electrical Conductivity	DETSC 2009*	1900	Y	N/A	N/A	N/A	N/A	N/A
Phytotoxic contaminants (by soil pH) mg/kgDS								
Zinc (Nitric acid extract)	DETSC 2308*	110.4	Y	Y	Y	Y	Y	Y
Copper (Nitric acid extract)	DETSC 2308*	74.5	Y	Y	Y	Y	Y	Y
Nickel (Nitric acid extract)	DETSC 2308*	20.7	Y	Y	Y	Y	Y	Y
Visible contaminants % m/m								
>2 mm	*	0	Y	Y	Y	Y	Y	Y
...of which plastics	*	0	Y	Y	Y	Y	Y	Y
...man made sharps	*	0	Y	Y	Y	Y	Y	Y

Additional analytical certificate(s) for particle size distribution analysis are appended.

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Textural Class

Our Ref 26-01085
Client Ref ~ P2600035
Contract Title ~ Newton Le Windows

Results: Proportion in class (%)			
Clay	**Silt**	**Sand**	**Help messages**
0	43	57	

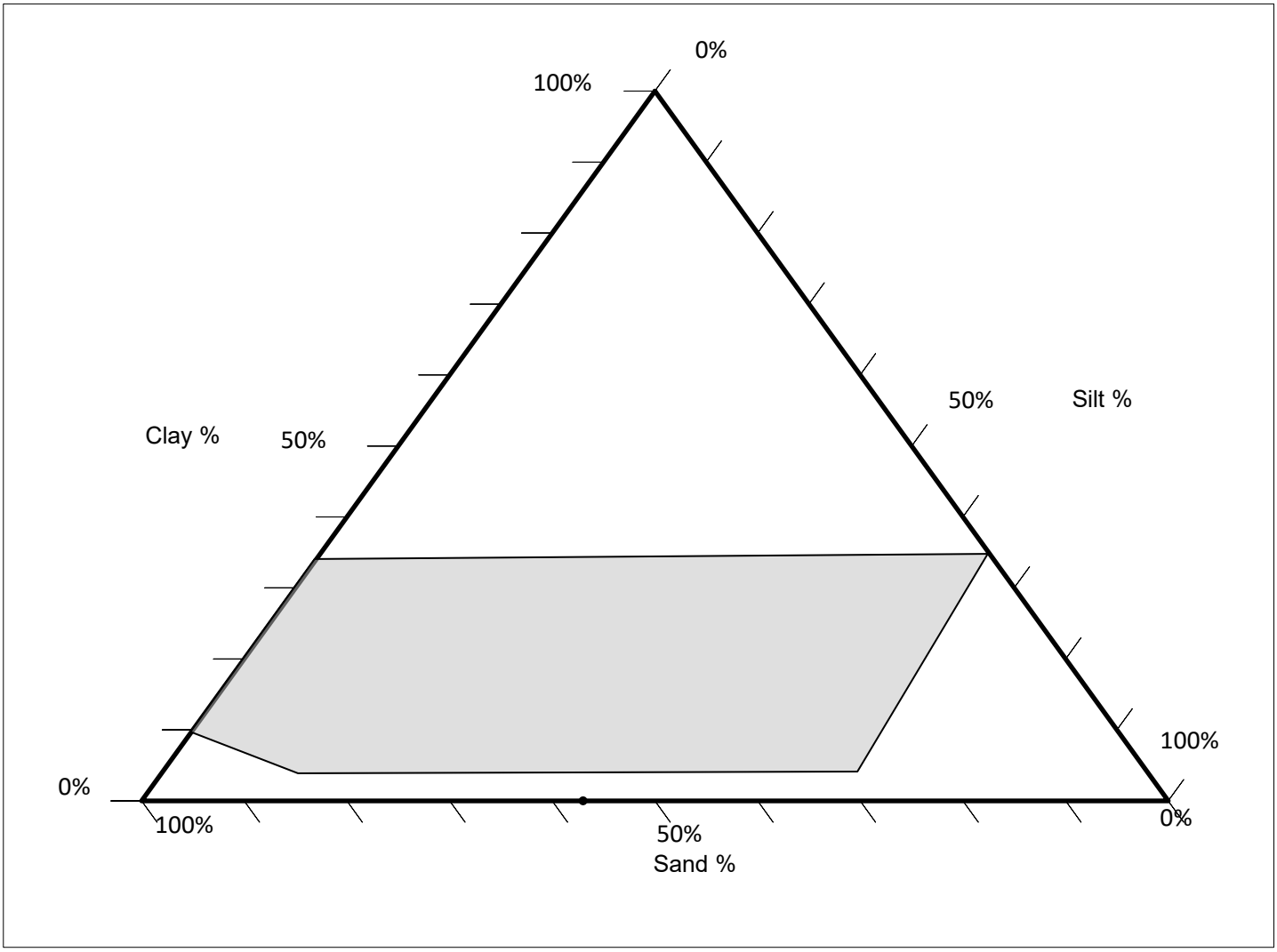


Figure 1
The textural class is required to be in the shaded area.
Results are shown by the grey point in the chart

Plotting parameters		Help messages
Printer correction:	1.1	
Tick interval (0 - 0.5):	0.1	
Tick length (0 - 0.2):	0.03	
Plot lines? (Y or N):	n	

Topsoil
Threshold Values

Parameter	Multipurpose Topsoil	Specific purpose topsoil				
		Acidic	Calcareous	Low fertility	Low fertility acidic	Low fertility calcareous
Soil texture <2mm fraction % m/m						
Clay content %	10 to 35					
Silt content %	0 to 65					
Sand content %	35 to 85					
Maximum course fraction % m/m						
>2 mm	30					
>20mm	10					
>50mm	0					
Mass loss on Ignition %						
Clay 5% to 20%	3 to 20	3 to 30	3 to 20	2 to 20	2 to 30	2 to 20
Clay 20% to 35%	5 to 20	5 to 30	5 to 20	2 to 20	2 to 30	2 to 20
Soil pH	5.5 to 8.5	3.5 to 5.5	7.5 to 9.0	3.5 to 9.0	3.5 to 5.5	7.5 to 9.0
Carbonate % m/m			>1			>1
Plant nutrient content						
Total nitrogen % m/m	>0.15	>0.15	>0.15	-	-	-
Extractable phosphate mg/l	16 to 140	16 to 140	16 to 140	≤20	≤20	≤20
Extractable potasium mg/l	121 to 1500	121 to 1500	121 to 1500	-	-	-
Extractable magnesium mg/l	51 to 600	51 to 600	51 to 600	-	-	-
Carbon : Nitrogen ratio	<20:1	<20:1	<20:1	<35:1	<35:1	<20:1
Electrical conductivity µS.cm-1	<3300					

Multi purpose and specific purpose topsoils			
Potentially Phytotoxic elements (mg/kg dry basis)	Soil pH <6.0	Soil pH 6.0 to 7.0	Soil pH >7.0
Zn	<200	<200	<300
Cu	<100	<135	<200
Ni	<60	<75	<110
Visible contaminants %m/m	<0.5		
of which plastics	<0.25		
Sharps, number	0% per Kg		

Summary of Asbestos Analysis
Soil Samples

Our Ref 26-01085
Client Ref ~ P2600035
Contract Title ~ Newton Le Windows

Lab No	Sample ID	Material Type	Result	Comment*	Analyst
2627428	Stockpile 1 Sample 1	SOIL	NAD	none	James Heath
2627429	Stockpile 1 Sample 2	SOIL	NAD	none	James Heath
2627430	Stockpile 1 Sample 3	SOIL	NAD	none	James Heath
2627431	Subsoil Stockpile 2/3 Sample 1	SOIL	NAD	none	James Heath
2627432	Subsoil Stockpile 2/3 Sample 2	SOIL	NAD	none	James Heath
2627433	Subsoil Stockpile 2/3 Sample 3	SOIL	NAD	none	James Heath

Crocidolite = Blue Asbestos, Amosite = Brown Asbestos, Chrysotile = White Asbestos. Anthophyllite, Actinolite and Tremolite are other forms of Asbestos. Samples are analysed by DETSC 1101 using polarised light microscopy in accordance with HSG248 and documented in-house methods. NAD = No Asbestos Detected. Where a sample is NAD, the result is based on analysis of at least 2 sub-samples and should be taken to mean 'no asbestos detected in sample'. Key: * -not included in laboratory scope of accreditation.

Information in Support of the Analytical Results

Our Ref 26-01085
Client Ref ~ P2600035
Contract ~ Newton Le Windows

Containers Received & Deviating Samples

Lab No	Sample ID ~	Date Sampled ~	Containers Received	time exceeded for tests	Incorrect container for tests	Headspace in container for tests
2627428	Stockpile 1 SOIL	16/01/26	GJ 250ml ((Headspace)), GJ 60ml ((Headspace)), PT 1L ((Headspace)) x2			BTEX/C5-10, HS
2627429	Stockpile 1 SOIL	16/01/26	GJ 250ml ((Headspace)), GJ 60ml ((Headspace)), PT 1L ((Headspace)) x2			BTEX/C5-10, HS
2627430	Stockpile 1 SOIL	16/01/26	GJ 250ml ((Headspace)), GJ 60ml ((Headspace)), PT 1L ((Headspace)) x2			BTEX/C5-10, HS
2627431	Subsoil Stockpile 2/3 SOIL	16/01/26	GJ 250ml ((Headspace)), GJ 60ml ((Headspace)), PT 1L ((Headspace)) x2			BTEX/C5-10, HS
2627432	Subsoil Stockpile 2/3 SOIL	16/01/26	GJ 250ml, GJ 60ml, PT 1L x2			
2627433	Subsoil Stockpile 2/3 SOIL	16/01/26	GJ 250ml ((Headspace)), GJ 60ml ((Headspace)), PT 1L ((Headspace)) x2			BTEX/C5-10, HS

Key: G-Glass P-Plastic J-Jar T-Tub
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Soil Analysis Notes

Inorganic soil analysis was carried out on a dried sample, crushed to pass a 250µm sieve
Organic soil analysis was carried out on an 'as received' sample. Organics results are corrected for moisture and expressed on a dry weight basis.
The Loss on Drying, used to express organics analysis on an air dried basis, is carried out at a temperature of 28°C +/-2°C.

Disposal

From the issue date of this test certificate, samples will be held for the following times prior to disposal :-
Soils - 1 month, Liquids - 2 weeks, Asbestos (test portion) - 6 months

Key:
~ Sample details are provided by the client and can affect the validity of the results
***** -not accredited.
# -MCERTS (accreditation only applies if report carries the MCERTS logo).
$ -subcontracted.
n/s -not supplied.
I/S -insufficient sample.
U/S -unsuitable sample.
t/f -to follow.
nd -not detected.

End of Report Ver 25.10.03

B - NX Topsoil Verification Testing Results

Certificate of Analysis

Certificate Number	26-25100	*Issued:*	16-Oct-26

Client NX Consulting Ltd
Station House
Stamford New Road
Altricham
WA14 1EP

Our Reference	26-25100
Client Reference ~	NX601
Order No ~	(not supplied)
Contract Title ~	Didsbury West
Description	3 Soil samples.
Date Received	07-Oct-26
Date Started	07-Oct-26
Date Completed	16-Oct-26
Test Procedures	Identified by prefix DETSn (details on request).

Notes Opinions and interpretations are outside the laboratory's scope of ISO 17025 accreditation. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.

Approved By [redacted]
Louise Cook
Contracts Manager

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Summary of Chemical Analysis
Soil Samples

Our Ref 26-25100
Client Ref ~ NX601
Contract Title ~ Didsbury West

	Lab No	2762313	2762314	2762315
	Sample ID ~	HP1	HP2	HP3
	Depth ~	0.30	0.40	0.10
	Other ID ~			
	Sample Type ~	SOIL	SOIL	SOIL
	Sampling Date ~	05/10/2026	05/10/2026	05/10/2026
	Sampling Time ~	n/s	n/s	n/s

Test	Method	LOD	Units			
Preparation						
Glass >2mm	*	0.1	% m/m	< 0.1	< 0.1	< 0.1
Metal >2mm	*	0.1	% m/m	< 0.1	< 0.1	< 0.1
Plastic >2mm	*	0.1	% m/m	< 0.1	< 0.1	< 0.1
Stones Removed	DETSC 1003*			Y	Y	Y
Metals						
Arsenic	DETSC 2301#	0.2	mg/kg	15	16	14
Boron, Water Soluble (2.5:1)	DETSC 2311#	0.2	mg/kg	0.3	0.6	0.5
Cadmium	DETSC 2301#	0.1	mg/kg	0.3	0.3	0.3
Calcium, Available	DETSC 2309*	0.1	mg/kg	2400	1800	1300
Chromium	DETSC 2301#	0.15	mg/kg	20	21	18
Chromium III	DETSC 2301*	0.15	mg/kg	20	21	18
Copper, Nitric Acid Soluble	DETSC 2308*	1	mg/kg	47	36	52
Copper	DETSC 2301#	0.2	mg/kg	54	53	50
Lead	DETSC 2301#	0.3	mg/kg	78	78	89
Magnesium, Available	DETSC 2309*	0.1	mg/l	110	180	93
Mercury	DETSC 2325#	0.05	mg/kg	0.24	0.29	0.26
Nickel, Nitric Acid Soluble	DETSC 2308*	1	mg/kg	14	12	16
Nickel	DETSC 2301#	1	mg/kg	20	20	19
Phosphate, Available	DETSC 2310*	0.3	mg/l	36	35	1.1
Potassium, Available	DETSC 2309*	0.1	mg/l	150	200	130
Selenium	DETSC 2301#	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Sodium, Available	DETSC 2309*	0.1	mg/kg	24	30	24
Zinc, Nitric Acid Soluble	DETSC 2308*	1	mg/kg	67	55	77
Zinc	DETSC 2301#	1	mg/kg	84	96	81
Inorganics						
Soil Density	DETSC 2019*	0.1	g/ml	1.26	1.39	1.26
Conductivity, Calcium Sulphate Extractable	DETSC 2009*	1	uS/cm	2000	2000	1900
pH	DETSC 2008#		pH	7.6	7.7	7.8
Cyanide, Total	DETSC 2130#	0.1	mg/kg	< 0.1	< 0.1	0.1
Total Organic Carbon	DETSC 2084#	0.5	%	3.8	3.8	3.6
Organic matter	DETSC 2002#	0.1	%	3.7	10	5.9
Carbonate (as CO3)	DETSC 2005	1.4	%	< 1.4	< 1.4	< 1.4
Kjeldahl Nitrogen, Total	DETSC 2121*	0.01	%	0.05	0.10	0.11
Sulphide	DETSC 2024*	10	mg/kg	< 10	< 10	< 10
Sulphate as SO4, Total	DETSC 2321#	100	mg/kg	521	451	471
Petroleum Hydrocarbons						
Aliphatic C5-C6	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01
Aliphatic C6-C8	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01
Aliphatic C8-C10	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01
Aliphatic C10-C12	DETSC 3072#	1.5	mg/kg	< 1.5	< 1.5	< 1.5

Summary of Chemical Analysis
Soil Samples

Our Ref 26-25100
Client Ref ~ NX601
Contract Title ~ Didsbury West

	Lab No	2762313	2762314	2762315
	Sample ID ~	HP1	HP2	HP3
	Depth ~	0.30	0.40	0.10
	Other ID ~			
	Sample Type ~	SOIL	SOIL	SOIL
	Sampling Date ~	05/10/2026	05/10/2026	05/10/2026
	Sampling Time ~	n/s	n/s	n/s

Test	Method	LOD	Units			
Aliphatic C12-C16	DETSC 3072#	1.2	mg/kg	< 1.2	< 1.2	< 1.2
Aliphatic C16-C21	DETSC 3072#	1.5	mg/kg	< 1.5	< 1.5	< 1.5
Aliphatic C21-C35	DETSC 3072#	3.4	mg/kg	< 3.4	< 3.4	< 3.4
Aliphatic C5-C35	DETSC 3072*	10	mg/kg	< 10	< 10	< 10
Aromatic C5-C7	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01
Aromatic C7-C8	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01
Aromatic C8-C10	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01
Aromatic C10-C12	DETSC 3072#	0.9	mg/kg	< 0.9	< 0.9	< 0.9
Aromatic C12-C16	DETSC 3072#	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Aromatic C16-C21	DETSC 3072#	0.6	mg/kg	< 0.6	< 0.6	< 0.6
Aromatic C21-C35	DETSC 3072#	1.4	mg/kg	< 1.4	< 1.4	< 1.4
Aromatic C5-C35	DETSC 3072*	10	mg/kg	< 10	< 10	< 10
TPH Ali/Aro Total C5-C35	DETSC 3072*	10	mg/kg	< 10	< 10	< 10
PAHs						
Naphthalene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03
Acenaphthylene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03
Acenaphthene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03
Fluorene	DETSC 3303	0.03	mg/kg	< 0.03	< 0.03	< 0.03
Phenanthrene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03
Anthracene	DETSC 3303	0.03	mg/kg	< 0.03	< 0.03	< 0.03
Fluoranthene	DETSC 3303#	0.03	mg/kg	0.04	< 0.03	0.04
Pyrene	DETSC 3303#	0.03	mg/kg	0.04	< 0.03	0.04
Benzo(a)anthracene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03
Chrysene	DETSC 3303	0.03	mg/kg	< 0.03	< 0.03	< 0.03
Benzo(b)fluoranthene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03
Benzo(k)fluoranthene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03
Benzo(a)pyrene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03
Indeno(1,2,3-c,d)pyrene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03
Dibenzo(a,h)anthracene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03
Benzo(g,h,i)perylene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03
PAH - USEPA 16, Total	DETSC 3303	0.1	mg/kg	< 0.10	< 0.10	< 0.10
Phenols						
Phenol - Monohydric	DETSC 2130#	0.3	mg/kg	1.0	0.8	0.9

Summary of Asbestos Analysis
Soil Samples

Our Ref 26-25100
Client Ref ~ NX601
Contract Title ~ Didsbury West

Lab No	Sample ID	Material Type	Result	Comment*	Analyst
2762313	HP1 0.30	SOIL	NAD	none	Darryl Fletcher
2762314	HP2 0.40	SOIL	NAD	none	Darryl Fletcher
2762315	HP3 0.10	SOIL	NAD	none	Darryl Fletcher

Crocidolite = Blue Asbestos, Amosite = Brown Asbestos, Chrysotile = White Asbestos. Anthophyllite, Actinolite and Tremolite are other forms of Asbestos. Samples are analysed by DETSC 1101 using polarised light microscopy in accordance with HSG248 and documented in-house methods. NAD = No Asbestos Detected. Where a sample is NAD, the result is based on analysis of at least 2 sub-samples and should be taken to mean 'no asbestos detected in sample'. Key: * -not included in laboratory scope of accreditation.

Information in Support of the Analytical Results

Our Ref 26-25100
Client Ref ~ NX601
Contract ~ Didsbury West

Containers Received & Deviating Samples

Lab No	Sample ID ~	Date Sampled ~	Containers Received	Holding time exceeded for tests	Incorrect container for tests
2762313	HP1 0.30 SOIL	05/10/26	GJ 250ml, GJ 60ml, PT 1L x2		
2762314	HP2 0.40 SOIL	05/10/26	GJ 250ml, GJ 60ml, PT 1L		
2762315	HP3 0.10 SOIL	05/10/26	GJ 250ml, GJ 60ml, PT 1L		

Key: G-Glass P-Plastic J-Jar T-Tub

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End of Report Ver 26.05.23