3, 5 & 7 FITZJOHNS AVENUE: FRONT & BACK GARDENS

SITE WIDE SOFTWORKS

SOIL SPECIFICATION

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APPLIED LANDSCAPE DESIGN

DOCUMENT REVISION HISTORY

	Date	Amendment	Creator	Checked
	09.11.2010	Title pages and cover added	CB	KmJ
	15.02.2011	Up Rev to Tender and Inclusion of Accurate Plan	CB	KmJ

REVIEW RECORD

	Date	Reviewers comments or page references	Initials / organisation
	09.11.2010	General review	KmJ – ALD

CONTENTS

Associated documents:

This document is to be read in conjunction with the following design principles and illustrative drawings, and supporting soft landscape related documents, reports and specification:

Document	Document Name
Concept Masterplan Front and Back Garden Landscape Proposal	ALD484 – MP101
Soft Landscape Proposal Planting Plan 1 of 3 (Bulbs, Trees and Hedges)	ALD484 – PL401
Soft Landscape Proposal Planting Plan 2 of 3 (Woodland and Front Garden)	ALD484 – PL402
Soft Landscape Proposal Planting Plan 3 of 3 (Summer Border and lower terrace)	ALD484 – PL403
Schedule of Soft Landscape Plant Material	ALD484 – SC951

1.0 INTRODUCTION

The Soil Specification document sets out the requirements for imported soils, and the measures and techniques for sampling and testing soil to be sourced for 3, 5 & 7 Fitzjohns Avenue soft landscape scheme, Camden, London. This document also sets out clauses relevant to the management and preparation of soils for planting, turfing and seeding.

Natural or manufactured soils should be obtained which comply with both the horticultural requirements (as detailed in Section 2.0) and environmental requirements (as detailed in Section 3.0).

All design criteria and specifications produced by the contractor must be submitted to the project landscape architect / architect for review and written approval at the earliest opportunity, prior to implementation.

1.1 Soil Types

A number of soil types are to be used for the construction of the landscape scheme to ensure that each planting environment has the correct growing conditions.

The soil materials covered by this specification document are:

Soil Type	Landscape Type
Topsoil 1 (over slab)	Tree and shrub planting in soft landscape areas Raised planters
Topsoil 2 (made ground)	Tree and shrub planting in soft landscape areas
Topsoil 3 (over slab)	Amenity grass lawn
Subsoil (over slab and made ground)	Wild flower meadow (over slab) Tree and shrub planting (made ground)

Soil Type	Landscape Type
Washed Sand (over slab)	Tree and shrub planting in soft landscape areas Raised planters Amenity grass lawn
Gravel (made ground)	Tree and shrub planting

In addition, a supply of appropriate 'Lightweight Aggregate' (e.g. *Maxit Leca 10/20*) shall be sourced by the Contractor, subject to approval.

1.2 Soil Profiles

The following soil profiles shall be prepared for each of the specified landscape environments.

Tree Planting in Soft Landscape Areas over Structure

Tree pits for trees in soft landscape areas shall be filled to a minimum depth of 750mm unless otherwise stated as below:

GL – 450mm Topsoil 1
450 –650mm Washed Sand to a maximum depth of 900mm to suit the levels of the mound

Shrub Planting in Soft Landscape Areas over Structure

Soiling for shrub planting in soft landscape areas shall be filled to a uniform depth of 700mm as below:

GL – 450mm Topsoil 1
450 –650mm Washed Sand
650 – 700mm Lightweight Aggregate (drainage layer minimum)

Tree Planting in Soft Landscape Areas over Made Ground

Set areas for tree planting in soft landscape not over concrete slab areas towards the edge of the garden shall be excavated to a uniform depth of 1.10m and backfilled as below:

GL – 450mm	Topsoil 2
450 – 1000mm	Subsoil
1000 – 1100mm	Gravel Drainage Layer - subject to site test on existing soil drainage

Shrub Planting in Soft Landscape Areas over Made Ground

The existing and new topsoil will need to be re-profiled to the relevant levels to allow for the shrub planting in soft landscape areas to grow as below:

GL – 450mm	Topsoil 2 or reuse existing topsoil if there is enough and it is to an adequate standard
450 – 500mm	Gravel Drainage Layer - subject to site test on existing soil drainage

Raised Planters

The raised planters are assumed to be 500mm deep and, as such, shall be backfilled as below:

GL – 400mm	Topsoil 1
400 – 500mm	Washed Sand

If deeper, then Lightweight Aggregate will be require to make up the depth

Amenity Grass Lawns over Structure

The amenity grass lawn areas are to be prepared with the following *minimum* soil depths:

GL – 200mm	Topsoil 3
200 – 300mm	Washed Sand
300 – 700mm	Thin Lightweight Aggregate layer (ALD484-SP921 Clause Q28:210) over polystyrene blocks (ALD484-SP921 Q28:211) to create the required levels

Wild Flower Meadow over Structure

The amenity grass lawn areas are to be prepared with the following *minimum* soil depths:

GL – 200mm	Subsoil
200 – 300mm	Washed Sand
300 – +700mm	Thin Lightweight Aggregate layer (ALD484-SP921 Clause Q28:210) over polystyrene blocks (ALD484-SP921 Q28:211) to create the 'mound' and the required levels

2.0 HORTICULTURAL SOIL REQUIREMENTS

2.1 Topsoil 1

Topsoil 1 shall meet the following criteria:

Visual Examination

The topsoil shall be free from non-soil material, brick and other building materials and wastes, sharps, hydrocarbons, plant matter, weed seeds or roots, and any other foreign matter or material or substance that would render the topsoil unsuitable for horticultural use.

Laboratory Analysis

The soil shall comply with the following lower and upper limits:

Parameter	Unit	Lower Limit	Upper Limit
Clay (<0.002mm)	%	5	18
Silt (0.002-0.05mm)	%	5	35
Sand (0.05-2.0mm) Of which at least 45% shall fall into fine to medium sand range	%	60	85
Stones (2-20mm)	%DW	--	15
Stones (>20mm)	%DW	--	0
Permeability	mm/hr	5	75
pH Value	Unit	6.0	8.5
Electrical Conductivity (1:2.5 water extract)	µS/cm	--	1500
Electrical Conductivity (CaSO4 extract)	µS/cm	--	2800
Exchangeable Sodium Percentage	%	--	15
Organic Matter	%	4.0	8.0
Total Nitrogen	%	0.20	--
Extractable Phosphorus	mg/l	26	120
Extractable Potassium	mg/l	240	1200
Extractable Magnesium	mg/l	50	600
Calcium Carbonate	%	--	5

2.2 Topsoil 2

Topsoil 1 shall meet the following criteria:

Visual Examination

The topsoil shall be free from non-soil material, brick and other building materials and wastes, sharps, hydrocarbons, plant matter, weed roots, stolons, rhizomes, and any other foreign matter or material or substance that would render the topsoil unsuitable for horticultural use.

Laboratory Analysis

The soil shall comply with the following lower and upper limits:

Parameter	Unit	Lower Limit	Upper Limit
Clay (<0.002mm)	%	5	18
Silt (0.002-0.05mm)	%	5	35
Sand (0.05-2.0mm) Of which at least 45% shall fall into fine to medium sand range	%	55	80
Stones (2-20mm)	%DW	--	15
Stones (20-50mm)	%DW	--	20
Stones (>50mm)	%DW	--	0
Permeability	mm/hr	1	35
pH Value	Unit	6.0	8.5
Electrical Conductivity (1:2.5 water extract)	µS/cm	--	1500
Electrical Conductivity (CaSO4 extract)	µS/cm	--	2800
Exchangeable Sodium Percentage	%	--	15
Organic Matter	%	4.0	8.0
Total Nitrogen	%	0.20	--
Carbon: Nitrogen Ratio	--	--	20:1
Extractable Phosphorus	mg/l	26	120
Extractable Potassium	mg/l	240	1200
Extractable Magnesium	mg/l	50	600
Calcium Carbonate	%	--	10

2.3 Topsoil 3

Topsoil 3 shall meet the following criteria:

Visual Examination

The topsoil shall be free from non-soil material, brick and other building materials and wastes, sharps, hydrocarbons, plant matter, weed seeds or roots, and any other foreign matter or material or substance that would render the topsoil unsuitable for horticultural use.

Laboratory Analysis

The soil shall comply with the following lower and upper limits:

Parameter	Unit	Lower Limit	Upper Limit
Clay (<0.002mm)	%	--	10
Silt (0.002-0.05mm)	%	--	10
Sand (0.05-2.0mm) Of which at least 55% shall fall into fine to medium sand range	%	75	90
Stones (2-20mm)	%DW	--	10
Stones (>20mm)	%DW	--	0
Permeability	mm/hr	40	270
pH Value	Unit	7.0	8.5
Electrical Conductivity (1:2.5 water extract)	µS/cm	--	1500
Electrical Conductivity (CaSO4 extract)	µS/cm	--	2800
Exchangeable Sodium Percentage	%	--	15
Organic Matter	%	2.0	4.0
Total Nitrogen	%	0.15	--
Extractable Phosphorus	mg/l	26	70
Extractable Potassium	mg/l	300	1200
Extractable Magnesium	mg/l	50	600
Calcium Carbonate	%	--	5

2.4 Subsoil

Subsoil shall meet the following criteria:

Visual Examination

The subsoil shall be free from non-soil material, brick and other building materials and wastes, sharps, hydrocarbons, plant matter, weed roots, stolons, rhizomes, anaerobism, and any other foreign matter or material or substance that would render the subsoil unsuitable for horticultural use.

Laboratory Analysis

The soil shall comply with the following lower and upper limits:

Parameter	Unit	Lower Limit	Upper Limit
Clay and Silt (<0.05mm)	%	15	40
Sand (0.05-2.0mm) Of which at least 50% shall fall into fine to medium sand range	%	60	85
Stones (2-20mm)	%DW	--	35
Stones (20-75mm)	%DW	--	15
Stones (>75mm)	%DW	--	0
Permeability	mm/hr	4	120
pH Value	Unit	6.0	8.5
Electrical Conductivity (1:2.5 water extract)	µS/cm	--	1500
Electrical Conductivity (CaSO4 extract)	µS/cm	--	2800
Exchangeable Sodium Percentage	%	--	15
Organic Matter	%	--	1.5
Calcium Carbonate	%	--	10

2.5 Washed Sand

Washed Sand that is to be used in this landscape scheme shall be a quarried washed sand material that meets the following requirements:

Visual Examination

The sand shall be free from non-soil material, brick and other building materials and wastes, sharps, hydrocarbons, plant matter, weed seeds or roots, and any other foreign matter or material or substance that would render the sand unsuitable for horticultural use.

Parameter	Unit	Lower Limit	Upper Limit
Fines (less than 0.15mm)	%	0	10
Sand (0.05-2.0mm) Of which at least 50% shall fall into medium sand range	%	90	100
Stones (2-10mm)	%DW	--	10
Stones (>10mm)	%DW	--	0
Permeability	mm/hr	180	360
pH Value	Unit	5.5	8.5
Electrical Conductivity (1:2.5 water extract)	µS/cm	--	1000

2.6 Soakage Layer Gravel

Gravel that is to be used in the soakage layer at the base of planting bed or hedge trench shall be a quarried, washed, non-calcareous, sub-rounded to rounded gravel with particle size 5-10mm.

3.0 ENVIRONMENTAL REQUIREMENTS

All imported soils must comply with Site Specific Assessment Criteria (SSAC) for a range of inorganic and organic contaminants.

The following criteria are based on the understanding that the soft landscape scheme will include areas with the potential for food production.

The environmental criteria for this End Use and their thresholds are set out in the table below:

Parameter	**Unit**	**SSAC**
Inorganic Arsenic	mg/kg	32
Beryllium	mg/kg	51
Boron	mg/kg	291
Cadmium	mg/kg	10
Chromium (III)	mg/kg	3000
Copper	mg/kg	200
Lead	mg/kg	450
Inorganic Mercury $Hg2^{+}$	mg/kg	170
Nickel	mg/kg	110
Selenium	mg/kg	350
Vanadium	mg/kg	75
Zinc	mg/kg	300
Benzene	mg/kg	0.33
Toluene	mg/kg	610
Ethylbenzene	mg/kg	350
Xylene m	mg/kg	240
Xylene o	mg/kg	250
Xylene p	mg/kg	230

Phenol	mg/kg	420
Aliphatics C5-C6	mg/kg	110
Aliphatics C6-C8	mg/kg	370
Aliphatics C8-C10	mg/kg	110
Aliphatics C10-C12	mg/kg	283*
Aliphatics C12-C16	mg/kg	142*
Aliphatics C16-C35	mg/kg	76000
Aliphatics C35-C44	mg/kg	76000
Aromatics C5-C7	mg/kg	280
Aromatics C7-C8	mg/kg	611
Aromatics C8-C10	mg/kg	151
Aromatics C10-C12	mg/kg	346
Aromatics C12-C16	mg/kg	593
Aromatics C16-C21	mg/kg	770
Aromatics C21-C35	mg/kg	1230
Aromatics C35-C44	mg/kg	1230
Aromatic and Aliphatic C44-C70	mg/kg	1300
Acenaphthene	mg/kg	1000
Acenaphthylene	mg/kg	850
Anthracene	mg/kg	9200
Benz(a)anthracene	mg/kg	5.9
Benzo[a]pyrene	mg/kg	1.0
Benz(b)fluoranthene	mg/kg	7.0
Benzo(g,h,l)perylene	mg/kg	47
Benz(k)fluoranthene	mg/kg	10
Chrysene	mg/kg	9.3

Dibenzo[a,h]anthracene	mg/kg	0.90
Fluoranthene	mg/kg	670
Fluorene	mg/kg	780
Indeno(1,2,3-cd)pyrene	mg/kg	4.2
Naphthalene	mg/kg	8.7
Phenanthrene	mg/kg	380
Pyrene	mg/kg	1600
Total Cyanide	mg/kg	20
Sulphate (soluble)	mg/l	500
Sulphate (total potential)	%	0.24
Asbestos	Present/ Absent	Absent

*Note: Soil or vapour saturation limit.

4.0 SOIL SAMPLING AND TESTING

4.1 Sampling Protocol

The soil materials considered for importation shall be sampled while stockpiled off site at their source or manufacture location. The Contractor shall carry out verification tests on the soil materials and await written approval from the project Soil Scientist prior to importing the soil to site.

A suitably qualified Soil Technician shall be employed to undertake the sampling of the soil materials considered for importation. The Contractor shall ensure that 48 hours notice is provided to the project Soil Scientist prior to undertaking the sampling.

The samples shall be truly representative of the soil to be offered. One *Composite Sample* shall be taken for every **500m^3** of topsoil to be used. At least **3 No. samples** shall be tested from each source/supplier.

Each composite sample should be made up of **10 No. sub-samples** taken from evenly spaced locations across the stockpile/field. The sub-samples shall be mixed together and quartered down to form a **15kg** composite sample. Each composite sample shall be placed in a clean, strong plastic bag and a 1 litre brown glass, wide-necked jar (fro organics testing) and each labelled with the source reference and date of sampling. Glass jar samples shall be stored and delivered to the laboratory in a cool box within 24hrs of sampling.

Soils of different types should never be mixed to form a composite sample.

The sample results will be analysed on a 10 working day turnaround and the Contractor should incorporate this into their programme. An accelerated analysis turnaround will be permitted at the Contractors cost where programme constraints deem this necessary.

The sampled soil materials shall be temporarily stockpiled at the source location while the Contractor awaits receipt of the soil analysis results and until the project Soil Scientist has reviewed the results and provided written approval on its suitability for use within the project.

4.2 Testing Schedules

The composite samples shall be sent to a UKAS and MCerts accredited laboratory(s) with a request for each sample to be analysed strictly in accordance with relevant *Testing Schedule* given below.

4.2.1 Topsoil

The composite topsoil samples shall be tested prior to approval by the Soil Scientist. The following parameters shall be requested (methods in accordance with BS3882:2007 or as indicated):

1. Visual examination to record the presence of any deleterious materials
2. pH Value (1:2.5 soil/water extract)
3. Electrical Conductivity (1:2.5 soil/water extract)
4. Electrical Conductivity (1:2.5 soil/CaSO4 extract)
5. Exchangeable Sodium Percentage
6. Particle Size Analysis (clay, silt, 5 sands – USGA sieve sizes)
7. Stone Content by % weight (2-20mm, 20-50mm, >50mm)
8. Total Nitrogen (% - Dumas Method)
9. Extractable Phosphorus, Potassium & Magnesium (RB427 Method)
10. Calcium carbonate (% - BS7755:3:10:1995)
11. Organic Matter (%)
12. Permeability (BS1377:Part 5,1990 Section 5 Falling Head - 2.5kg rammer)
13. **Potential Contaminants** – See parameters in **Section 3**

4.2.2 Washed Sand

The composite sand sample(s) shall be tested prior to approval by the Soil Scientist. The following parameters shall be requested:

1. Visual examination to record the presence of any deleterious materials
2. pH Value (1:2.5 soil/water extract)
3. Electrical Conductivity (1:2.5 soil/water extract)
4. Particle Size Analysis (clay, silt, 5 sands)
5. Permeability (BS1377:Part 5,1990 Section 5 Falling Head - 2.5kg rammer)
6. Stone Content by % weight (>2mm, >10mm)
7. **Potential Contaminants** – See parameters in **Section 3**

4.3 Reporting

The Contractor shall provide the project Soil Scientist with a report for each source and type of topsoil and washed sand. Each report shall contain the following information:

- Source name and location
- Date of sampling;
- Details of Soil Technician, including company information, qualifications;
- Description of the soil (and components used if a manufactured topsoil);
- Volume of the soil in each stockpile and number of samples taken;
- A plan and sketches detailing the locations where the samples were taken;
- Photographs of the stockpile and the soils;
- Laboratory details (name, address, contact, accreditation numbers);
- Visual examination;
- Certificates of Analysis.

5.0 SOIL MANAGEMENT

The following measures for topsoil handling, preparation and amelioration shall be adhered to, to ensure that a suitable soil profile is constructed for planting, turfing and seeding.

5.1 Soil Handling

For the duration of the soiling and landscape construction works, the following soil handling measures shall be adhered to:

- It is important to avoid physical degradation during all phases of soil handling (e.g. spreading, cultivation, amelioration, planting and seeding). As a consequence, soil handling operations should be carried out when soil is non-plastic (friable) in consistency.
- In particular, it is important to ensure that the topsoil is not unnecessarily compacted by trampling or trafficking by site machinery. In addition, soil handling should be stopped during and after heavy rainfall, and not continue until the soil has regained a non-plastic (friable) consistency.
- If, during the course of the soiling and landscape works, the soil is compacted, it will be important to ensure that it is suitably cultivated to relieve the compaction and restore the structure prior to any planting, turfing or seeding.
- Ensure that each type of topsoil and the washed sand are not mixed with each other or other building materials during importation, handling and temporary storage.

5.2 Spreading Washed Sand

- Remove all temporary roads/surfacing /building materials before spreading washed sand.
- Unless otherwise agreed by the project Soil Scientist prior to soiling operations, the washed sand shall be respread using the ‘loose-tipping’ method.
- A dump truck shall transport the washed sand to the desired location and tip it in a line of heaps.
- The washed sand shall be spread by a second excavator working from the lightweight aggregate layer or a temporary surface or adjacent hardstanding.
- The washed sand shall be spread and then firmed by trampling in (restricted access areas), tracking in or using the excavator bucket (as deemed appropriate). Depths after firming and settlement (minimum) to be as specified.

5.3 Spreading Topsoil

- Remove all temporary roads/surfacing /building materials before spreading topsoil.
- Unless otherwise agreed by the project Soil Scientist prior to soiling operations, all topsoil shall be respread using the 'loose-tipping' method.
- A dump truck shall transport the topsoil to the desired location and tip it in a line of heaps.
- The topsoil shall be spread by a second excavator working from the washed sand layer or a temporary surface or adjacent hardstanding.
- The topsoil shall be spread and then firmed by trampling in (restricted access areas), tracking in or using the excavator bucket (as deemed appropriate). Depths after firming and settlement (minimum) to be as specified.

5.4 Topsoil Cultivation

- After respreading topsoil, any large, compacted lumps of soil shall be broken down by appropriate cultivation (in accordance with BS 4428) to produce a fine tilth suitable for planting (<30mm), turfing and seeding (<10mm). The topsoil may be compacted and anaerobic after storage in the stockpile. It shall be cultivated to its full depth using appropriate tillage equipment to decompact and fully re-aerate.
- Only when the topsoil has lost any sour odour and grey coloration will it be satisfactory for planting, turfing or seeding.
- Any undesirable material brought to the surface during this exercise should be removed by picking or raking. For example, stones, fill materials and coarse vegetation larger than 50mm in any dimension.

5.5 Finished Levels After Settlement

- Above adjoining paving or kerbs: 25 mm.
- Below dpc of adjoining buildings: Not less than 150 mm.
- Shrub areas: Higher than adjoining grass areas by 50mm.
- Adjoining soil areas: Marry in.

5.6 Soil Ameliorants

5.6.1 Compost for Planting – *Provisional Item*

For tree and shrub planting, apply and incorporate a suitable compost (e.g. an approved green compost) into the topsoil at a rate of 20% by volume into the upper 200mm topsoil, (equivalent to a layer 40mm thick).

5.6.2 Fertiliser for Planting – *Provisional Item*

To address the nutrient deficiencies and to help promote effective establishment, apply and incorporate the compound, slow release fertiliser *Enmag Lite* (4%N:19%P_2O_5:10%K_2O: 5%MgO) at a rate of 80g/m^2 and to a depth of 250mm.

5.6.3 Fertiliser for Amenity Grass Establishment – *Provisional Item*

To address the nutrient deficiencies and to help promote effective grass establishment, apply and incorporate the pre-seeding grass fertiliser *Scotts PS5 Preseeder* (8%N:12%P_2O_5:8%K_2O +2%Mg+seaweed extract) prior to seeding or turfing at a rate of 35 g/m^2 and to a depth of 100mm.

6.0 QUALITY CONTROL

Quality control checks by the project Soil Scientist will be carried out as appropriate. It is the responsibility of the Contractor to inform the project Soil Scientist when the stages of the work have been completed to a satisfactory standard in accordance with the quality levels indicated.

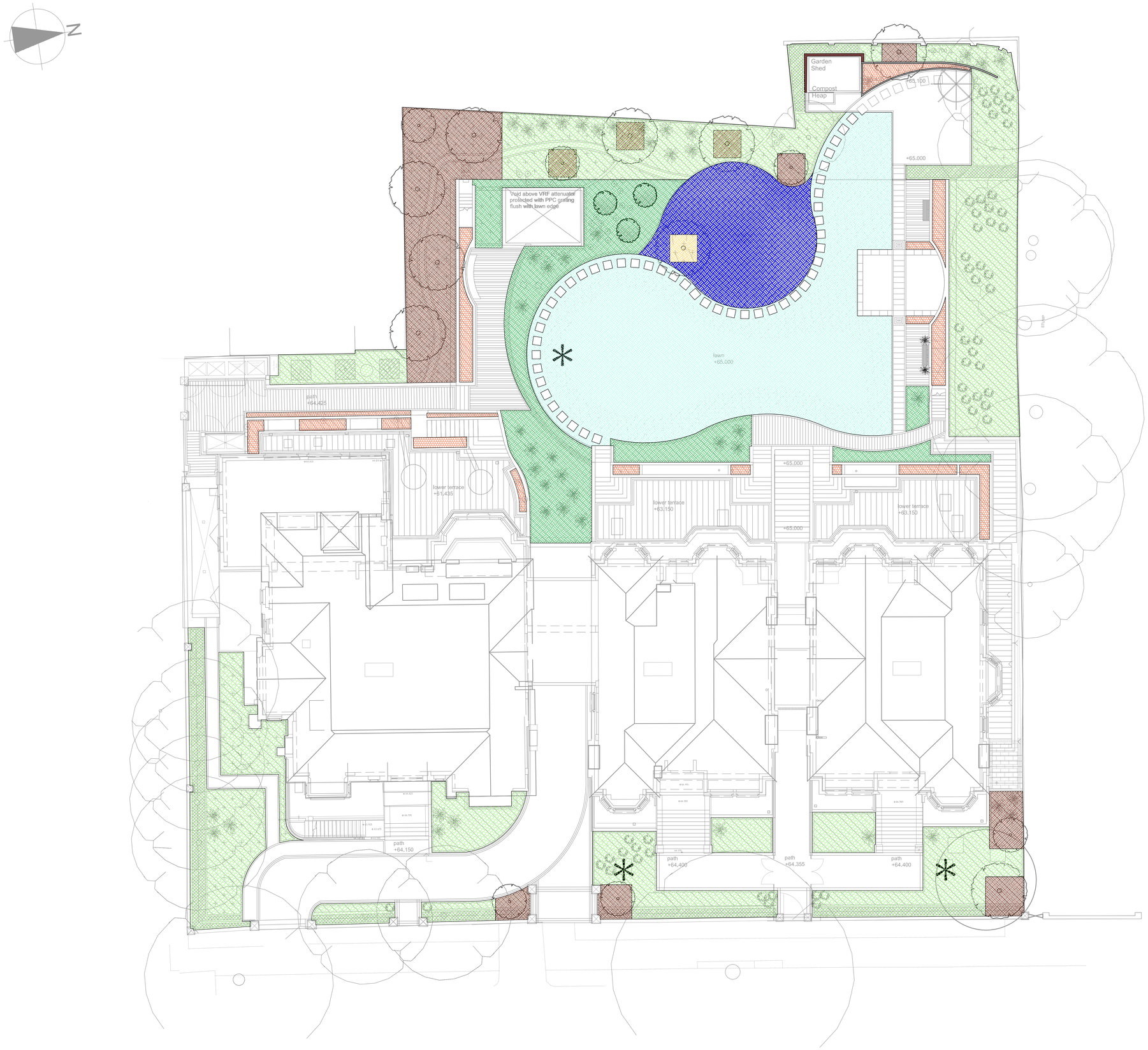
6.1 Soil Amendments

Notice shall be sent to the project Soil Scientist giving, on receipt at least 48 hours' notice of the start of all work as indicated under quality control checks. Quality control checks will be carried out on all areas as determined by the project Soil Scientist.

6.2 Inspections

Each stage will be offered for inspection by the project Soil Scientist prior to work on the next stage commencing. Work must not proceed to the next stage until the project Soil Scientist has given written authorisation. It is recognised that the Contractor my wish to carry out the work stages with more than one stage continuing at any one time.

7.0 APPENDIX 1 - LOCATION OF SOIL TYPES



All dimensions to be verified on site. Figured dimensions to take precedent to those scaled. Any areas indicated on the drawing are for guidance only; no responsibility is taken for their accuracy.

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CDM/H&S

Working from height

NOTES / KEY:

The following soil profiles shall be prepared for each of the specified landscape environments.

TREE PLANTING IN SOFT LANDSCAPE AREAS OVER STRUCTURE
Tree pits for trees in soft landscape areas shall be filled to a minimum depth of 750mm unless otherwise stated as below:

GL - 450mm	Topsoil 1
450 - 650mm	Washed Sand to a maximum depth of 950mm to suit the levels of the mound

SHRUB PLANTING IN SOFT LANDSCAPE AREAS OVER STRUCTURE
Soiling for shrub planting in soft landscape areas shall be filled to a uniform depth of 700mm as below:

GL - 450mm	Topsoil 1
450 - 650mm	Washed Sand
650 - 700mm	Lightweight Aggregate (drainage layer minimum)

TREE PLANTING IN SOFT LANDSCAPE AREAS OVER MADE GROUND
Set areas for tree planting in soft landscape not over concrete slab areas towards the edge of the garden shall be excavated to a uniform depth of 1.10m and backfilled as below:

GL - 450mm	Topsoil 2
450 - 1000mm	Subsoil
1000 - 1100mm	Gravel Drainage Layer - subject to site test on existing soil drainage

SHRUB PLANTING IN SOFT LANDSCAPE AREAS OVER MADE GROUND
The existing and new topsoil will need to be re-profiled to the relevant levels to allow for the shrub planting in soft landscape areas to grow as below:

GL - 450mm	Topsoil 2 or reuse existing topsoil if there is enough and it is to an adequate standard
450 - 500mm	Gravel Drainage Layer - subject to site test on existing soil drainage

RAISED PLANTERS
The raised planters are assumed to be 500mm deep and, as such, shall be backfilled as below:

GL - 400mm	Topsoil 1
400 - 500mm	Washed Sand

If deeper, then Lightweight Aggregate will be required to make up the depth

AMENITY GRASS LAWNS OVER STRUCTURE
The amenity grass lawn areas are to be prepared with the following *minimum* soil depths:

GL - 200mm	Topsoil 3
200 - 300mm	Washed Sand
300 - 700mm	Thin Lightweight Aggregate layer (ALD484-SP921 Clause Q28:210) over polystyrene blocks (ALD484-SP921 Q28:211) to create the required levels

WILD FLOWER MEADOW OVER STRUCTURE
The wild flower meadow areas are to be prepared with the following *minimum* soil depths:

GL - 200mm	Subsoil
200 - 300mm	Washed Sand
300 - +700mm	Thin Lightweight Aggregate layer (ALD484-SP921 Clause Q28:210) over polystyrene blocks (ALD484-SP921 Q28:211) to create the 'mound' and the required levels

REFERENCE DRAWINGS/DOCUMENTS

REVISIONS

no.	issued	date
P02	Retaining Wall added to BBQ area	22.02.2011

LANDSCAPE ARCHITECT:
APPLIED LANDSCAPE DESIGN
The Threshing Barn, Bignell Park Barns,
Chesterton, Nr. Bicester, Oxfordshire OX26 1TD
Tel: 01869 240776 Fax: 01869 327513
Email: mail@appliedlandscape.co.uk

PROJECT:

3,5 & 7 FITZJOHNS AVENUE LONDON, NW3

DRAWING TITLE:

SOFT LANDSCAPE PROPOSAL
EARTHWORKS

drawn: WP	checked: CB
scale: 1:100 @ A0	date: 15.02.2011
status: TENDER	xref file ref: ALD484_IR501

PROJECT NO.	DRAWING NUMBER:	REVISION:
ALD484	IR501	P02

ORIGINAL A0 SIZE SHEET