CampbellReith
consulting engineers

Greenwood Centre: Remediation Specification

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Document history:

Date	Clause Revisions and Purpose	Prepared by	Checked by
April 2017	P1 – For planning submission	D. Maclean	G. Plain
Dec 2017	P2 – Updated for planning	D. Maclean	G. Plain

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Limiting Values for the import of topsoil in soft planted areas (raise planters) (S4ULs – Allotments)

Supporting Information

Drawings:
wwa_1611_LD_504_C02 Roof level details
wwa_1611_LP_303_C01 Roof Planting Plan
wwa_1611_LP_301_C02 Ground Floor Planting Plan
wwa_1611_LP_302_C01 First Floor and Second Floor Planting Plan
Report:
The Environmental Protection Group, Vapour Risk Assessment: The Greenwood Centre, Camden, NW5, Dec 2016 V1.

PART A

1.0 INTRODUCTION

1.1 Background

1.1.1 The site is located at Greenwood Place, London, NW5, in the London Borough of Camden (NGR 528840E, 185400N), approximately 200m north-west of Kentish Town Station. The site has planning consent for the construction of a Community Centre. The proposal includes a three storey structure and small plant room located in a basement.

1.1.2 As part of the planning application submission, the ground investigation and risk assessment included within the CampbellReith Land Quality Statement (previously submitted and accepted) identified hazardous ground gas, and stipulated the requirement for validation of topsoil used in any proposed soft landscaped areas. The requirement for the written scheme of remediation measures is detailed under Planning Condition 21b of consent reference 2015/3151/P.

1.2 Purpose of Remediation Specification

1.2.1 This Remediation Specification extends the requirements to: control Hazardous, Aggressive or Unsuitable Materials associated with formation inspections; maintain a full waste record; and, to provide additional chemical test validation records associated with all granular/cohesive fills and soil materials as necessary for the protection of human health and the environment.

1.2.2 Section 2.4 details the requirements for testing of material imported with regard to protection of human health only, and does not detail the geotechnical requirements of any imported material.

1.2.3 It is not the intention of this specification to require additional testing of imported construction materials (although this does not negate requirements for testing stated elsewhere).

1.2.4 The information specified shall be provided in full by the Contractor and supplied to CampbellReith (as an independent person) in order to compile a Verification Report.

1.3 Overview of Granular/Cohesive Fill and Soil Materials

1.3.1 The following principal waste streams will be generated as part of the ground-works:

1. Soils associated with excavating the basement, piles, pile caps, ground beams and service corridors.

2. If identified subsequently, Hazardous, Aggressive or Unsuitable Materials as defined herein.

1.3.2 Waste streams comprising concrete are likely to be classified as 'non-hazardous' (subject to classification and/or analyses as detailed within the specification). Made Ground excavated from the site should be appropriately classified.

1.3.3 There are no areas of topsoil on the site currently, and therefore any areas of planting would require topsoil import. This should be validated as suitable for use in accordance with the screening criteria in Appendix A. The thickness of validated soils shall be 600mm of validated topsoil and subsoil (proportions of topsoil to subsoil to be confirmed by landscape architects).

1.4 Ground Gas

1.3.1 The LQS included a screening exercise identifying a potential risk of Volatile Organic Compounds (VOC) relating to the previous land use as a heavy chemicals warehouse.

1.3.2 The ground gas risk was further assessed by a Detailed Quantitative Risk Assessment for VOC vapours by The Environmental Protection Group Ltd (1). This risk assessment concluded that no remedial work is required however this was based upon the requirement that:

- The basement (plant room) and ground level floor slab are to be constructed fully in accordance with the development proposals outlined in the EPG vDQRA (1); and
- All service ducts should be fully sealed to prevent them acting as a conduit for vapour migration. Particular care should be used to seal any service ducts which provide a conduit for multiple cables. In this instance a proprietary duct sealing system should be used (e.g. http://filoform.co.uk/filoseal-plus, http://www.cablejoints.co.uk/sub-product-details/duct-eals-duct-sealing-csd-rise-duct-seal, or similar).

1.3.4 For full details of the ground gas mitigation required, the original Vapour DQRA (1) should be consulted and the recommendations followed.

1.4 Contacts

1.4.1 The CampbellReith contacts for the purpose of this specification are:

Dicken Maclean
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Part B

2.0 GROUNDWORKS SPECIFICATION AND ADDITIONAL REQUIREMENTS

2.0.1 These requirements have been expanded herein should be read in addition to other matters specified elsewhere. The Contractor shall be required to discharge all these matters in full.

2.1 GENERAL

104X VERIFICATION RECORDS FOR LAND QUALITY

The Contractor shall provide the following factual information which contains collated and indexed records associated with the requirements of Clauses:

442X - REMOVAL OF WASTE MATERIAL FROM SITE
500A - CHEMICAL TESTING OF FILL MATERIAL BEFORE FILLING
- Evaluation Record
- Record of Placement of 600mm (total depth) validated topsoil and subsoil in soft landscaped areas
- Analytical Evaluation
526P - RECORDS TO DEMONSTATE THE CHEMICAL SUITABILITY OF ANY VALIDATED SOIL LAYER

In addition it shall contain:

- An overview chronology of works
- Details of all communications held with the Environment Agency and other regulatory bodies during implementation of the works
- Method Statements for Environmental Protection and the Control of Contamination

The Factual Information shall be provided within 1 month to the independent consultant (independent to the contractor) who shall collate the information into a verification report for submission to the Local Authority.

All information shall be digitally compiled into a report in PDF format.

Separate copies of photographs shall be additional provided in JPEG format.

Analytical testing results shall also be provided in AGS 4 format (or subsequent editions). AGS data will only be accepted when submitted with accompanying validation / checking files.

All surveys shall be supplied with coordinates and levels to National Grid and Ordnance Datum. They shall be provided in digital AutoCAD format.

The Verification Report including validation of soil is to be carried out by an Independent person.

106X PRE-WORKS DOCUMENTATION

The Contractor shall provide to the Engineer the following documents. The Contractor shall allow 7 working days from receipt for review and comments as necessary:

- Details, including licence details, of nominated landfills and waste haulers.
- A Method Statement detailing the course of action should unforeseen hazardous, aggressive or unsuitable materials (as defined under Clause 510A) be encountered.
- A Method Statement detailing the methodologies for chemical testing, waste classification and handling and landfill compliance testing (WAC) in order to fulfil the requirements of Clause 442X.

115X SITE INVESTIGATION

No warranty is given to the accuracy of the information available or that the materials excavated will not vary from those referred to in the Site Investigation Report.

2.2 CLEARANCE/EXCAVATIING

261X FORMATIONS FOR VEHICULAR/GROUND BEARING SLAB AREAS: Preparation and surface treatment:

All soft, hazardous, aggressive, unsuitable, grossly contaminated (i.e. free phase oil/ bulk asbestos containing materials) and/or material rendered unacceptable due to construction traffic, adverse moisture content, exposure to rain etc. shall be excavated and replaced with approved material and compacted in accordance with this Specification.

262X INSPECTING FORMATIONS

Throughout works a watching brief shall be maintained by the Contractor for contamination. All excavations and formations shall be inspected by the Contractor for visual or olfactory evidence of HAZARDOUS, AGGRESSIVE OR UNSTABLE MATERIALS: as defined in Clause 510A.

If such substances do not occur, the Contractor shall:

Provide a letter of confirmation that a watching brief for contamination was maintained and none identified during works.

If such substances do occur, the Contractor shall:

- notify the Engineer and Local Authority Environmental Health Officer in writing
- if not otherwise instructed, excavate and remove these materials from site in accordance with an agreed Method Statement considering Pollution Prevention Guidelines and collate associated records.

The Contractor shall provide at least 7 days written notice to the Engineer and Local Authority Environmental Health Officer of the opportunity to inspect the affected areas and shall not cover without prior agreement within this time period.

A written record of the Inspection shall be produced where HAZARDOUS, AGGRESSIVE OR UNSTABLE MATERIALS occur. This shall include:
- date of the inspection
- the location of affected materials (site plan)
- surveys and photographs of the formation and excavation extents
- details of the event / actions taken
- persons involved
- written notifications to the Engineer and Local Authority
- Waste Records
- site diaries associated with the identification / removal activity
- risk assessments and method statements for work
- a description of any residual contamination which remains

Tanks / Structures

In the event that any below ground structures or tanks are identified with the potential to contain HAZARDOUS, AGGRESSIVE OR UNSTABLE MATERIALS the Contractor shall prepare a Method Statement for works for their removal. This shall be agreed with the Local Authority prior to works.

The Method Statement shall include full details of the proposed works and a Risk Assessment which specifically addresses both risks to people, the environment, buildings and controlled water courses. This shall accord with the Environment Agency Pollution Prevention Guidelines. Where petroleum hydrocarbons are present the Contractor shall provide written notice to LFEPA and provide additional information as required by them.

320 RECORDED FEATURES

Recorded foundations, beds, drains, manholes, etc: Break out and seal drain ends.
Contaminated earth: Assess and if appropriate remove in accordance with Section 2.3.

2.3 DISPOSAL OF MATERIALS

442X DISPOSAL OF MATERIALS OFF SITE

The Contractor shall be responsible for the correct definition, handling and disposal of all 'Waste' that arises from the work in accord with current waste legislation and guidance.

The Contractor shall appoint a Site Waste Manager to ensure that Duty of Care compliance exists at all times. The Site Waste Manager shall co-ordinate the identification, handling and treatment of materials for re-use, recycling or disposal; and, manage and update the Site Waste Management Plan and Materials Management Plan (where appropriate).

The Contractor shall manage waste removed from site in accord with the Waste Regulations 2011. It shall either be lawfully disposed of in an appropriately licensed landfill or recycled in

a recovery facility. In both cases the receiving facility shall hold an appropriate Environmental Permit that has been confirmed as adequate for purpose by the Contractor.

Material shall not be removed from the site under an Environmental Permit Waste Exemption without the explicit written agreement of the Engineer.

The Contractor shall maintain a written record of all waste movements including as a minimum:

- Description of the origin and type of waste
- European Waste Catalogue (EWC) code
- Hazardous Properties Assessment (HPA) where required
- Waste classification records
- Waste carriers licence
- Chain of custody documentation from both site of origin and end of transit
- Copy of receiving landfill's Waste Management Licence
- Waste transfer / consignment notes and summary index on a per load basis;
- Volumes / weights of materials
- Copies of the relevant Environmental Permits

Analysis for Classification

The Contractor shall obtain chemical test results as necessary to ensure waste soils are properly classified in order to be disposed of at an appropriate waste disposal site.

The Contractor shall be responsible for obtaining any additional analysis necessary to characterise soils for proper disposal including any Waste Acceptance Criteria (WAC) testing required by the receiving landfill.

The Contractor shall be fully responsible for the correct categorisation of any inert, non-hazardous and hazardous waste in accordance with current technical guidance prepared by the Environment Agency and shall provide an appropriate Hazardous Properties Assessment (HPA) for hazardous waste to the Engineer.

The Contractor shall present a written detailed justification of the waste classification methodology and evaluation criteria used for each category of waste, including details of on-site processing for hazardous waste.

All records above shall be provided to the Engineer within 1 month of works completion or upon request.

Retention of Waste Onsite

Waste Materials shall only be maintained on site under either: the control of an approved Environmental Permit, or Materials Management Plan overseen by a Qualified Person. In both cases prior written notification shall be given to the Engineer before such actions are undertaken. In this circumstance the materials shall still comply with the other requirements of Clause 510A.

443X CLASSIFICATION OF MATERIAL FOR DISPOSAL

The Contractor shall utilise the existing chemical results and obtain test results as necessary to ensure soils are properly classified in order to be disposed of at an appropriate waste disposal site. The Contractor shall be responsible for obtaining any additional analysis necessary to characterise soils for proper disposal, including any Waste Acceptance Criteria (WAC) testing required by the landfill. The Contractor shall be fully responsible for the correct categorisation of any inert, non-hazardous and hazardous waste in with best practice guidance prepared by the Environment Agency and shall provide an appropriate Hazardous Properties Assessment (HPA) for hazardous waste if required at no additional cost.

The Contractor shall present a written detailed justification of the waste classification methodology and evaluation criteria used for each category of waste, including details of on-site processing for hazardous waste.

445X HAZARDOUS MATERIALS

The handling and disposal of hazardous materials encountered during the course of the construction works shall comply with the requirements of the Health & Safety Executive, the Local Authority, the Environment Agency or any other relevant regulatory body and as agreed with the Main Contractor.

2.4 FILLING

500A PROPOSED FILL MATERIALS

Details: Submit full details of proposed fill materials to demonstrate compliance with specification, including:

- Type and source of imported fill.
- Proposals for processing and reuse of material excavated on site.
- Test reports as required elsewhere.
- Further test certificates are required for any change or variation in materials arising from within or imported onto the site.

Timing: At least 21 days before starting filling.

501X ENVIRONMENTAL PERMITTING

Where necessary, the Contractor shall be responsible for obtaining all necessary licences and permits for the completion of works. For example, this may include the acquisition of a waste exemption.

510A HAZARDOUS, AGGRESSIVE OR UNSUITABLE MATERIALS:

General: Do not use fill materials which would, either in themselves or in combination with other materials or groundwater, give rise to a health hazard, damage to building structures or instability in the filling, including material that is:

- Frozen or containing ice.
- Organic.
- Contaminated or noxious.
- Susceptible to spontaneous combustion.
- Likely to erode or decay and cause voids.

- With excessive moisture content, slurry, mud or from marshes or bogs.
- Clay of liquid limit exceeding 80 and/or plasticity index exceeding 55.
- Unacceptable, class U2 as defined in the Highways Agency 'Specification for highway works', clause 601.
-Exceeding the 'Limiting Values' stated in clause 511X and Tables 1 and 2 (Appended).

511X HAZARDOUS, AGGRESSIVE OR UNSUITABLE MATERIALS (Limiting Values)

Fill Material in areas of soft landscaping: Shall not contain soils that exceed the Limiting Values states in attached Table 1.

526X CHEMICAL TESTING OF FILL MATERIALS IN THE TOP 600mm OF SOFT LANDSCAPING

The contractor is required to validate the top 600mm of topsoil and subsoil in areas of soft landscaping as suitable for its proposed use based on the screening criteria in Appendix A.

Samples shall be contained in appropriate sample vessels and couriered to the laboratory within 24 hours of sampling.
The time, date, location and personnel involved in this operation shall be recorded.
All analysis shall be UKAS and MCERTS accredited.
The Limits of Detection and documented method Bias/Accuracy shall be stated with the result and shall collectively allow determination below the Limiting Value threshold, shown in Table 1.

Submit report to: CampbellReith
Timing: 14 days before starting filling
Samples: Delivered to laboratory within 24 hours with associated full Chain of Custody records.

Additional requirements: The Contractor shall obtain testing records and inspect the source of each imported soil prior to importation. It shall remain the responsibility of the Contractor to undertake sufficient testing and source validation to ensure soils comply with Clause 500A, 511X and 526X.

Tests: To demonstrate compliance with specification, the following test frequency shall be applied and samples analysed for all determinands in Table 1. Imported Materials Testing Frequency:

- 3 test per source; thereafter,
- 1 test per 50m3; and
- 1 test per landscaped area.

Re-processed / Site Won Materials Testing Frequency

- 1 test per 25m3.

527X RECORDS TO DEMONSTRATE THE CHEMICAL SUITABILITY OF ANY VALIDATED SOIL LAYER

Where any Validated Soil Layer is placed the Contractor shall maintain an additional written record for each landscaped area including:

- location of placement linked to the Evaluation Record
- extent of placement and depth / thickness of layer
- a record of visual inspection
- photographs indicating layer build up with a scale ruler
- formation and finished level surveys

APPENDIX A

Table 1: Limiting Values for the import of topsoil and subsoil for placement within the top 600mm of soils placed in soft planted areas (S4ULs – Allotments)

SUBSTANCE	MAX SOIL CONCENTRATION (mg/kg) For use in areas under hard standing		
Soil Organic Matter (%)	1%	3%	5%
Arsenic	43		
Cadmium	1.9		
Chromium (Total)	18000		
Copper	520		
Inorganic Mercury (Total)	19		
Selenium	88		
Nickel	53		
Lead	80[A]		
Cyanide	18.6[B]		
Phenol	23	42	83
Naphthalene	4.1	10	24
Acenaphthylene	28	69	160
Acenaphthene	34	85	200
Fluorene	27	67	160
Phenanthrene	15	38	90
Anthracene	380	950	2200
Fluoranthene	52	130	290
Pyrene	110	270	620
Chrysene	4.1	9.4	19
Benzo(a)anthracene	2.9	6.5	13
Benzo(b)fluoranthene	0.99	2.1	3.9
Benzo(k)fluoranthene	37	75	130
Benzo(a)pyrene	0.97	2.0	3.5
Indeno(123-cd)pyrene	9.5	21	39
Benzo(ghi)perylene	290	470	640
Dibenzo(ah)anthracene	0.14	0.27	0.43
TPH>4-10	8.6	21	51
TPH>10-40	13	31	74
Asbestos	Free from loose fibres and ACM (i.e. >0.001w/w)		
Notes: S4ULs except: [A]C4SL and [B]Residential with plant uptake screening criteria.			

Justification – although the soft landscaping on the site is understood to be limited to raised planters, the community centre use of the site means that it is possible for planters to be utilised for growing of fruit and vegetables, and therefore it is considered that allotment screening criteria is appropriate.

Supporting Information

Drawings

wwa_1611_LD_504_C02 Roof level details

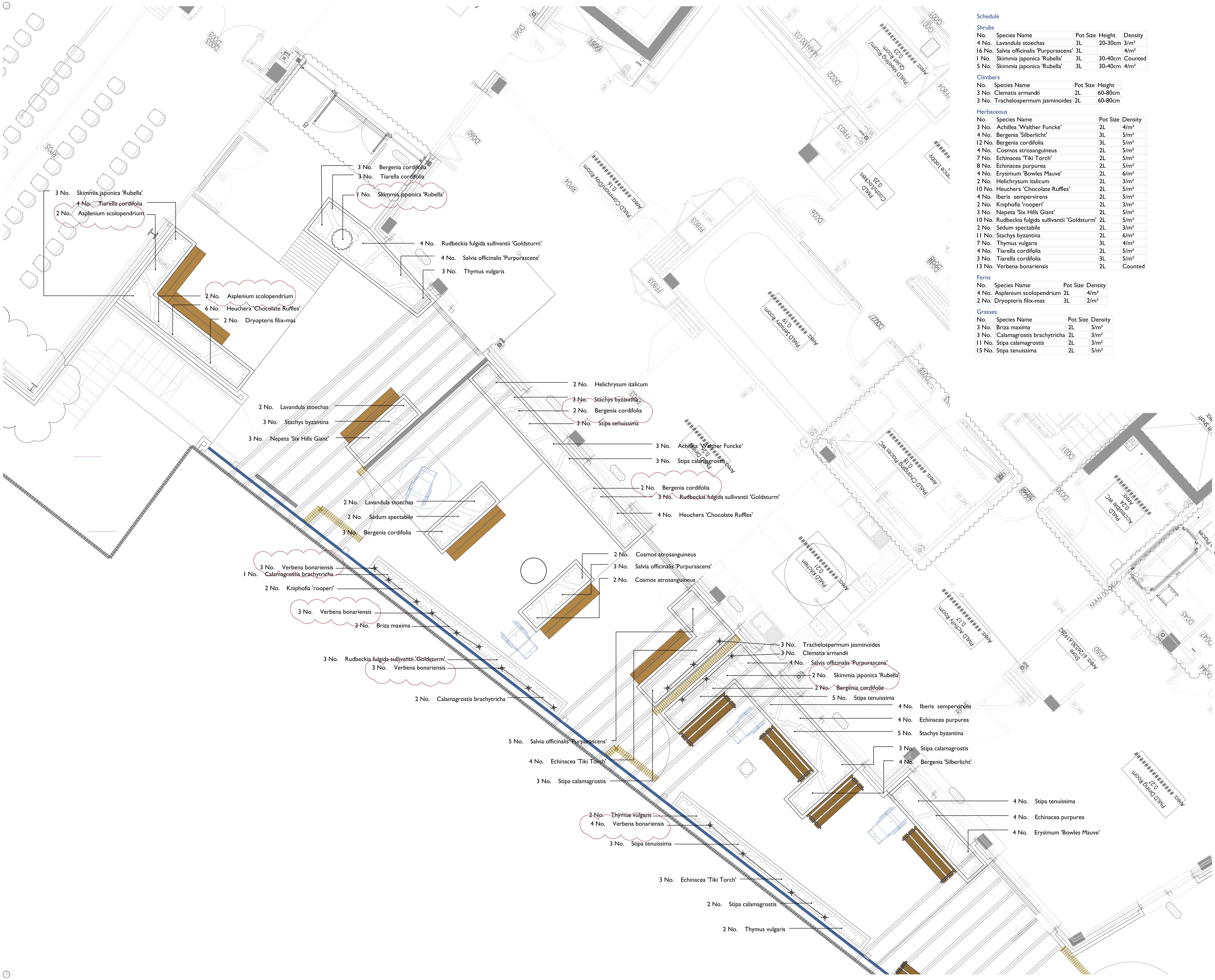
wwa_1611_LP_303_C01 Roof Planting Plan

wwa_1611_LP_301_C02 Ground Floor Planting Plan

wwa_1611_LP_302_C01 First Floor and Second Floor Planting Plan

Report

The Environmental Protection Group, Vapour Risk Assessment: The Greenwood Centre, Camden, NW5, Dec 2016 V1.



Schedule

Shrubs

No.	Species Name	Pot Size	Height	Density
4 No.	Lavandula stoechas	3L	20-30cm	3/m²
16 No.	Salvia officinalis 'Purpurascens'	3L		4/m²
1 No.	Skimmia japonica 'Rubella'	3L	30-40cm	Counted
5 No.	Skimmia japonica 'Rubella'	3L	30-40cm	4/m²

Climbers

No.	Species Name	Pot Size	Height
3 No.	Clematis armandii	2L	60-80cm
3 No.	Trachelospermum jasminoides	2L	60-80cm

Herbaceous

No.	Species Name	Pot Size	Density
3 No.	Achillea 'Walther Funcke'	2L	4/m²
4 No.	Bergenia 'Silberlicht'	3L	5/m²
12 No.	Bergenia cordifolia	3L	5/m²
4 No.	Cosmos atrosanguineus	2L	5/m²
7 No.	Echinacea 'Tiki Torch'	2L	5/m²
8 No.	Echinacea purpurea	2L	5/m²
4 No.	Erysimum 'Bowles Mauve'	2L	6/m²
2 No.	Helichrysum italicum	2L	3/m²
10 No.	Heuchera 'Chocolate Ruffles'	2L	5/m²
4 No.	Iberis sempervirens	2L	5/m²
2 No.	Kniphofia 'rooperi'	2L	3/m²
3 No.	Nepeta 'Six Hills Giant'	2L	5/m²
10 No.	Rudbeckia fulgida sullivantii 'Goldsturm'	2L	5/m²
2 No.	Sedum spectabile	2L	3/m²
11 No.	Stachys byzantina	2L	6/m²
7 No.	Thymus vulgaris	3L	4/m²
4 No.	Tiarella cordifolia	2L	5/m²
3 No.	Tiarella cordifolia	3L	5/m²
13 No.	Verbena bonariensis	2L	Counted

Ferns

No.	Species Name	Pot Size	Density
4 No.	Asplenium scolopendrium	2L	4/m²
2 No.	Dryopteris filix-mas	3L	2/m²

Grasses

No.	Species Name	Pot Size	Density
3 No.	Briza maxima	2L	5/m²
3 No.	Calamagrostis brachytricha	2L	3/m²
11 No.	Stipa calamagrostis	2L	3/m²
15 No.	Stipa tenuissima	2L	5/m²

NOTES:
All dimensions must be checked on site and not scaled from this drawing.
All cross references are to the latest revision of the relevant drawing or specification being referenced.

Rev	Date	Revisions	Drawn	Checked
C02	26/09/17	Clouded species amended and crocosmia removed from scheme	LN	GWW
C01	31/0317	Boundary fence line and external stairs updated to architects layout	AH	JL
C00	10/10/17	Construction Issue	AH	JL
T00	03/08/16	Stage 4 Issue	LN	KL
A	23/06/16	Layout amended and updated	LN	AH

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Client
Kier

Job Title
Greenwood Place

Drawing Title
Ground Floor Planting Plan

Issue: CONSTRUCTION

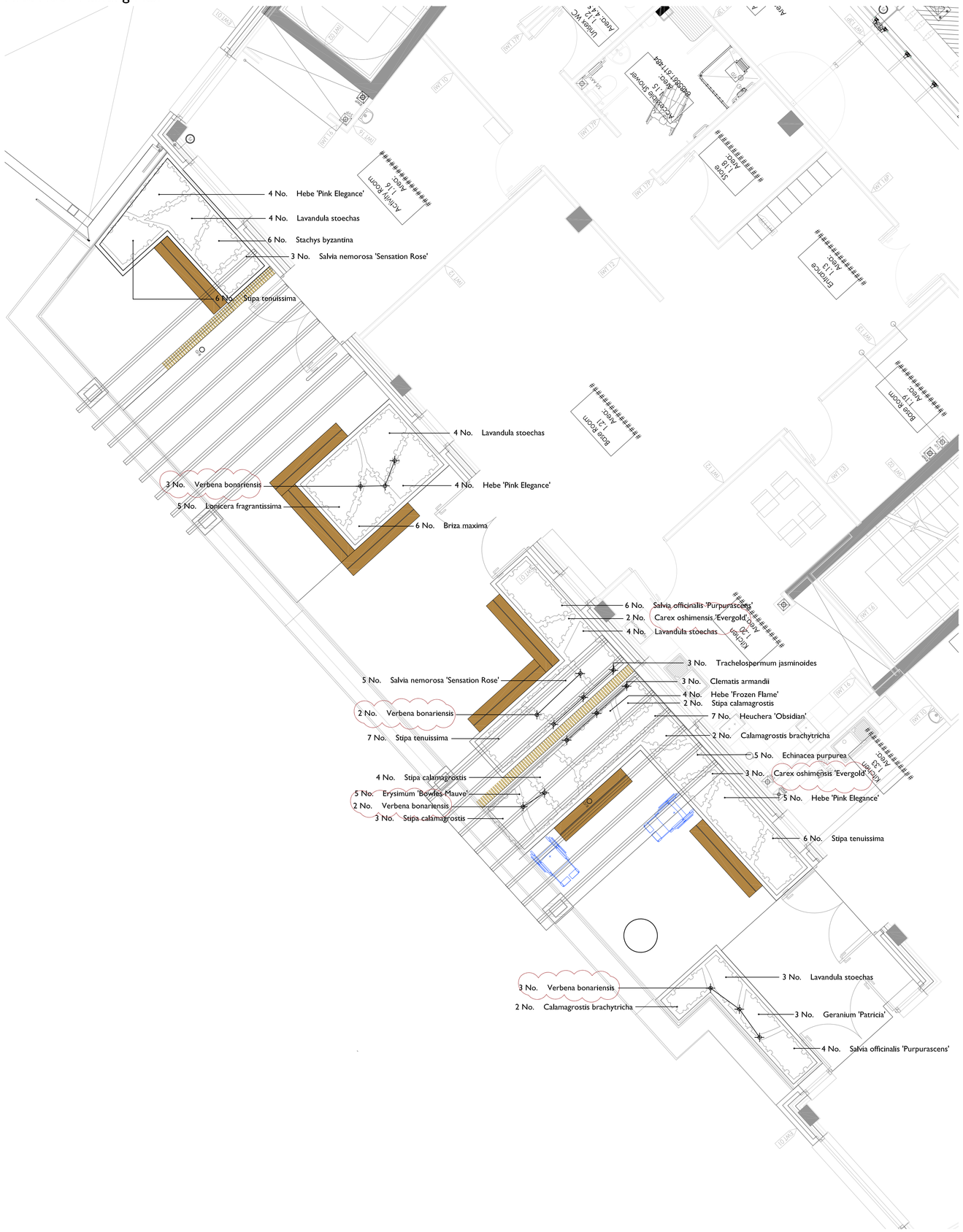
Scale: 1:50@A1

Date: 13/05/2016 — Drawn: LD

Date: 16/05/2016 — Checked: KL

Drawing Number: WWA/1611/LP/301 — Rev: C02

First Floor Planting Plan



Second Floor Planting Plan

Schedule

Shrubs

No.	Species Name	Pot Size	Height	Density
4 No.	Hebe 'Frozen Flame'	3L	30-40cm	3/m²
13 No.	Hebe 'Pink Elegance'	3L	30-40cm	3/m²
22 No.	Lavandula stoechas	3L	20-30cm	3/m²
5 No.	Lonicera fragrantissima	3L	30-40cm	3/m²
8 No.	Salvia nemorosa 'Sensation Rose'	3L		4/m²
10 No.	Salvia officinalis 'Purpurascens'	3L		4/m²

Climbers

No.	Species Name	Pot Size	Height
3 No.	Clematis armandii	2L	60-80cm
3 No.	Trachelospermum jasminoides	2L	60-80cm

Herbaceous

No.	Species Name	Pot Size	Density
3 No.	Bergenia 'Silberlicht'	3L	5/m²
4 No.	Cosmos atrosanguineus	2L	5/m²
5 No.	Echinacea purpurea	2L	5/m²
5 No.	Erysimum 'Bowles Mauve'	2L	6/m²
3 No.	Geranium 'Patricia'	2L	4/m²
7 No.	Heuchera 'Obsidian'	2L	5/m²
3 No.	Rudbeckia fulgida sullivantii 'Goldsturm'	2L	5/m²
10 No.	Stachys byzantina	2L	6/m²
10 No.	Verbena bonariensis	2L	Counted

Grasses

No.	Species Name	Pot Size	Density
6 No.	Briza maxima	2L	5/m²
4 No.	Calamagrostis brachytricha	2L	3/m²
5 No.	Carex oshimensis 'Evergold'	2L	4/m²
17 No.	Stipa calamagrostis	2L	3/m²
21 No.	Stipa tenuissima	2L	5/m²

NOTES:
All dimensions must be checked on site and not scaled from this drawing.
All cross references are to the latest revision of the relevant drawing or specification being referenced.

Rev	Date	Revisions	Drawn	Checked
C01	26/09/17	Clouded species amended and crocosmia removed from scheme	LN	GWW
C00	09/03/17	Construction Issue	AH	JL
T00	03/08/16	Layout amended and updated	LN	KL
A	23/06/16	Autism garden redesigned following client meeting	LN	AH

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Client

Kier

Job Title

Greenwood Place

Drawing Title

First Floor and Second Floor Planting Plans

Issue: CONSTRUCTION

Scale: 1:50@A1

Date: 13/05/2016 Drawn: LD

Date: 16/05/2015 Checked: KL

Drawing Number: wwa/1611/LP/302 Rev: C01

Schedule

Shrubs

No.	Species Name	Pot Size	Height	Density
9 No.	Lavandula stoechas	3L	20-30cm	3/m²
14 No.	Salvia officinalis 'Purpurascens'	3L		4/m²

Herbaceous

No.	Species Name	Pot Size	Density
6 No.	Bergenia cordifolia	3L	5/m²
5 No.	Cosmos atrosanguineus	2L	5/m²
4 No.	Echinacea purpurea	2L	5/m²
8 No.	Erysimum 'Bowles Mauve'	2L	6/m²
16 No.	Heuchera 'Chocolate Ruffles'	2L	5/m²
8 No.	Iberis sempervirens	2L	5/m²
2 No.	Kniphofia 'rooperi'	2L	3/m²
6 No.	Rudbeckia fulgida sullivantii 'Goldsturm'	2L	5/m²
4 No.	Sedum spectabile	2L	3/m²
4 No.	Thymus vulgaris	3L	4/m²
6 No.	Tiarella cordifolia	2L	5/m²

Ferns

No.	Species Name	Pot Size	Density
2 No.	Dryopteris filix-mas	3L	2/m²

Grasses

No.	Species Name	Pot Size	Density
11 No.	Briza maxima	2L	5/m²
2 No.	Calamagrostis brachytricha	2L	3/m²
9 No.	Carex oshimensis 'Evergold'	2L	4/m²
7 No.	Stipa calamagrostis	2L	3/m²
20 No.	Stipa tenuissima	2L	5/m²

Community growing beds

Amenity Grass
Aber Sustain seed mix supplied by
Germinal Seed
Sow at 40.00g/m2

NOTES:
All dimensions must be checked on site and not scaled from this drawing.
All cross references are to the latest revision of the relevant drawing or specification being referenced.

Rev	Date	Revisions	Drawn	Checked
C01	26/09/17	Clouded species amended and crocosmia removed from scheme	LN	GWW
C00	09/03/17	Construction Issue	AH	JL
T00	04/08/16	Stage 4 Issue	AH	KL

Scale and North

0 1 2 3 4 m 6 8 10

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Client

Kier

Job Title

Greenwood Place

Drawing Title

Rooftop Planting Plan

Issue: CONSTRUCTION

Scale: 1:100@A1

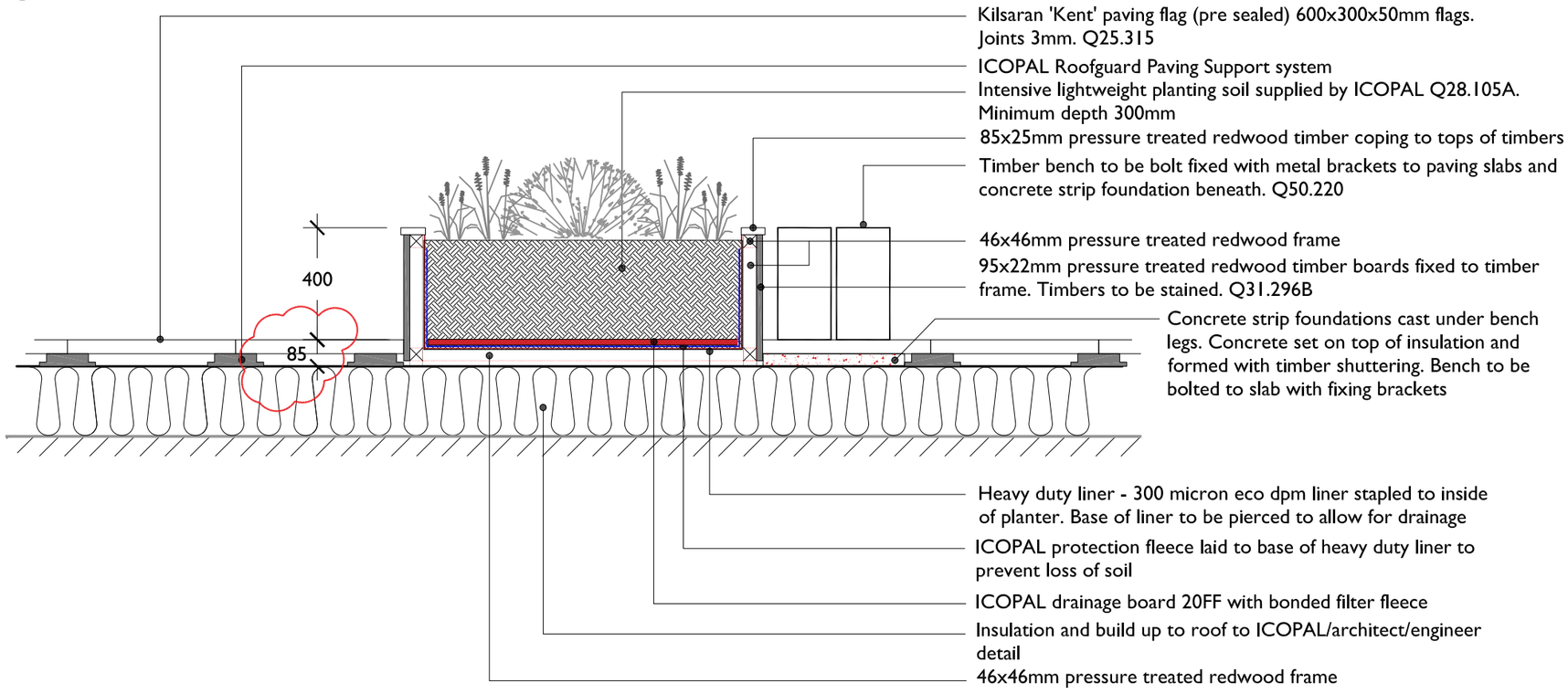
Date: 13/05/2016 | Drawn: LD

Date: 16/05/2016 | Checked: KL

Drawing Number: wwa_1611_LP_303 | Rev: C01

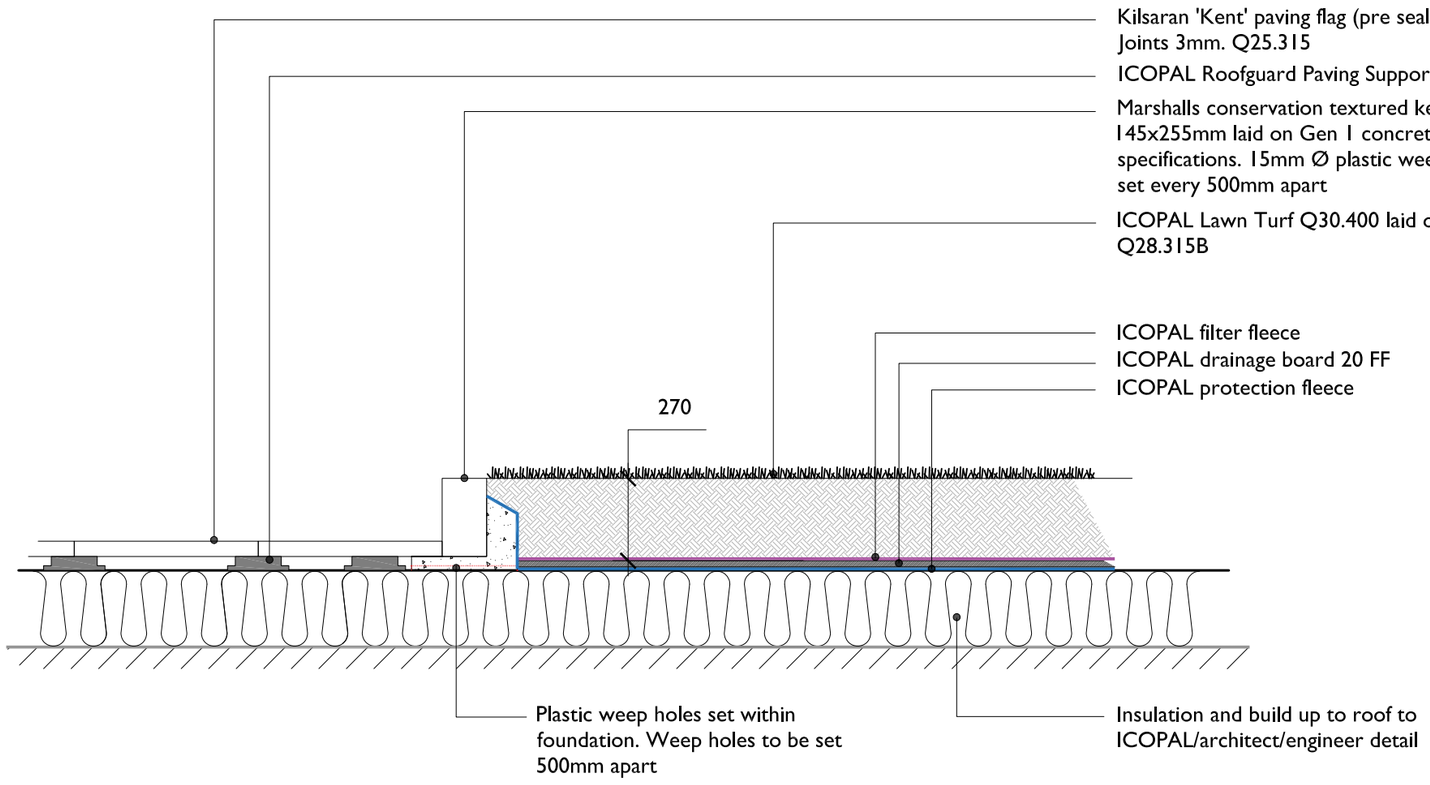
D01 504 Kilsaran Kent PCC Flags Q25.315, Raised Pressure Treated Redwood Timber Planter Q31.296B, Bench Seating and Kilsaran PCC Flags

Scale 1:20



D02 504 Kilsaren Kent PCC Flags Q25.120A , Conservation Kerb Q10.112A and Lawn/Wild Flower Area

Scale 1:20



NOTES:
All dimensions must be checked on site and not scaled from this drawing.
All cross references are to the latest revision of the relevant drawing or specification being referenced.

Note:

All planters to be bespoke made by Taylor Made Planters Ltd.
All timber to be smooth and free from splinters and shakes. All endgrain treated with Ronseal endgrain treatment.

Internal framework to be formed using 46x46mm pressure treated redwood pine and screwed together with 4inch torx. Framework to be clad with pressure treated redwood timber (stained as per Q31.296B) fixed using 2inch torx screws counter sunk from the inside to give clean appearance. Capping rail to be fixed from inside so no screws can be seen.

All planters to receive water storage irrigation units:
Mona Plant System - reservoir water storage units to all raised beds that are filled manually and irrigate planting, reducing maintenance requirements during periods of hot and dry weather. S14.330A

All raised planters to have a 25mm thick layer of bark mulch

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Issue: CONSTRUCTION

Rev	Date	Revisions	Drawn	Checked
C02	02/10/17	Raised planter amended	AH	
C01	31/03/17	Concrete foundation beneath benches added	AH	JL
C00	08/03/17	Construction Issue	AH	JL
T00	03/08/16	Stage 4 Issue	AH	KL
A	27/07/16	Raised timber planter detail amended	AH	JL

Client: Kier

Job Title: Greenwood Place

Drawing Title: Roof Level Details

Scale: 1:20@A2

Date: 12.05.16 | Drawn: TJ

Date: 16.05.16 | Checked: JL

Drawing Number: 1611_LD_504

Rev: C02