8.25 STABLE BLOCK & CAFE - ODOUR ASSESSMENT

Cooper8 Ltd

New Café Kitchen Ventilation Proposals

Site:

English Heritage
Marble Hill House
Richmond Road
Twickenham
London
TW1 2NL

March 17, 2017

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Introduction

The existing Coach House Café is currently leased by English Heritage to an independent operator. The proposed new cafe will be run in house and operated directly by English Heritage Catering. The new café is to be located in the existing coach house courtyard. It replaces a facility provided by the existing café. The menu offer will include hot food and freshly baked products. It will not include griddled, char grilled or deep fried products.

English Heritage want to minimize any potential nuisance from odour and noise to neighbour's and homes adjacent to the facility and have prepared this document to inform the council of their approach and proposals.

DEFRA Risk Assessment Summary

Defra have a document entitled 'Guidance on the Control of Odour and Noise from Commercial Kitchen Exhaust Systems.' It describes a method of risk assessment for odour, guidance on minimum requirements for odour and noise control, and advice on equipment selection.

Completed Risk Assessment

Section 1 – Background Information	
1.1 Contact Details – tell us who we need to contact for further information	Name *Simon C. Colley* Position *Catering Consultant* Tell Number *01424 422 784* E-Mail *simon@cooper8.co.uk* Address *2nd Floor* *7 Cambridge Road* *Hastings, East Sussex* *TN34 1DJ*

1.2 Proposed Hours of Operation	Mon-Sun *8.30am-5pm (Except Christmas Day)* *A number of evening events throughout the year – Approx 12.*
1.3 Type of Food to be served / Type of Catering Done	*Tea Shop / Café with Functions*
1.4 Kitchen Equipment to be used in the commercial kitchen	*Cooking Pots / Bains Marie / Steam Oven / Oven Ranges/ Electric Salamander*

2.1 Stack Dispersion – all commercial kitchens must have a chimney stack to expel odours from the kitchen. Please provide us with information on the stack you use / intend to use at your site.	Stack Height – in metres *2.1* Efflux Velocity – in meters per second *2.5* Will the stack be fitted with a plate cap or cowl? *A louvered grill*
Notes: 1. *Stack Height – this should be in meters above ground level* 2. *Efflux Velocity – this is the term used for how fast air is expelled from your stack. Your equipment supplier should be able to provide these details* 3. *Fitting any kind of restriction at the opening of a stack is bad practice as it hinders the dispersion of odours. Many alternative duct terminators are available to address this*	
2.2 Diagram	*Drawings attached – Appendix 01*

Section 2 – Risk Assessment			
Criteria	Score	Score	Details
Dispersion	Very Poor	20	Low level stack discharge, discharge into courtyard of restriction on stack
	Poor	15	Not low level but below eaves, or discharge at below 10 m/s
	Moderate	10	Discharging 1m above eaves at 10 – 15 m/s
	Good	5	Discharging 1m above rid ge at 15 m/s
Dispersion – score for your premises	*20*		
Proximity of receptors	Close	10	Closest sensitive receptor less than 20m from kitchen discharge
	Medium	5	Closest sensitive receptor between 20 – 100m from kitchen discharge
	Fair	1	Closet sensitive receptor more than 100m from kitchen discharge
Proximity of receptors – score for your premises	*5*		

Size of Kitchen	Large	5	More than 100 covers or large sized take away
	Medium	3	Between 30 – 100 covers or medium sized take away
	Small	1	Less than 30 covers or small take away
Size of kitchen – score for your premises	5		
Cooking Type (odour and grease loading)	Very High	10	Pub (high level of fried food), fried chicken, burgers or fish and chips
	High	7	Kebab, Vietnamese, Thai or Indian
	Medium	4	Cantonese, Japanese or Chinese
	Low	1	Most pubs, Italian, French, Pizza or steakhouse
Cooking type – score for your premises	1		
Add up the scores for the four different sections and write the total in the box below			
TOTAL SCORE	31		

The risk assessment score is used to see if you require low, high or very high level odour control.

Impact Risk	Odour Control Requirement	Score
Low to Medium	Low level odour control	Less than 20
High	High level odour control	20 to 35
Very High	Very high level odour control	More than 35

Section 3 – Odour Control
Refer to Appendix 03 for drawing representation of proposed ventilation canopy and UV filtration.

Section 4 – Maintenance
Any system will deteriorate over time, it is important that you have a plan to maintain the equipment that you have installed to retain its effectiveness. Guidance on the maintenance of kitchen extraction equipment and odour abatement plant is contained in the DEFRA Guidance on pages 76-80, further information should also be available from your supplier. Use the space below to explain how you intend to maintain the installed system.
Grease drawers and filters cleaned on a weekly basis. Fans and UV filtration checked on a 6 monthly basis. UV tubes changed as required and to manufacturer's literature. Ductwork cleaning as required, checked on a 12 monthly basis.

Section 5 – Noise	
Due to the fact that commercial kitchen extraction equipment is often operated at sensitive times it is important that they are designed to be as quiet as possible.	
5.1 What is the predicted noise level to be emitted by your kitchen extract fan in dB (A)	Extract fan dBA = 47 less attenuation 15dBA = approx 32 dBA
Note: *The noise level of your fan is something that your supplier should be able to provide you with. The noise level will either be a sound power level or Lw in dB or it will be a sound pressure level or Lp at a stated distance e.g. 60dB @ 1m. Please append any specification you have for the fan to this report.*	

Proposals

The risk score is 31 and indicates the need for a high level of odour control. Although the type of catering is of a ***low risk***, the extract stack will discharge below 10m. This is to avoid the ventilation stack height rising above the building and the neighbouring wall.

To mitigate and nuisance, we are proposing to use a Jevens UV Hood that has turbo-swing filters within the canopy. The separation rate at the swing filters is 90 to 95% and with the effect of UV photolysis / ozonoysis the odour removal rate will be 95-99% and constitutes a high level of odour control.

See proposed plans and equipment in Appendices.

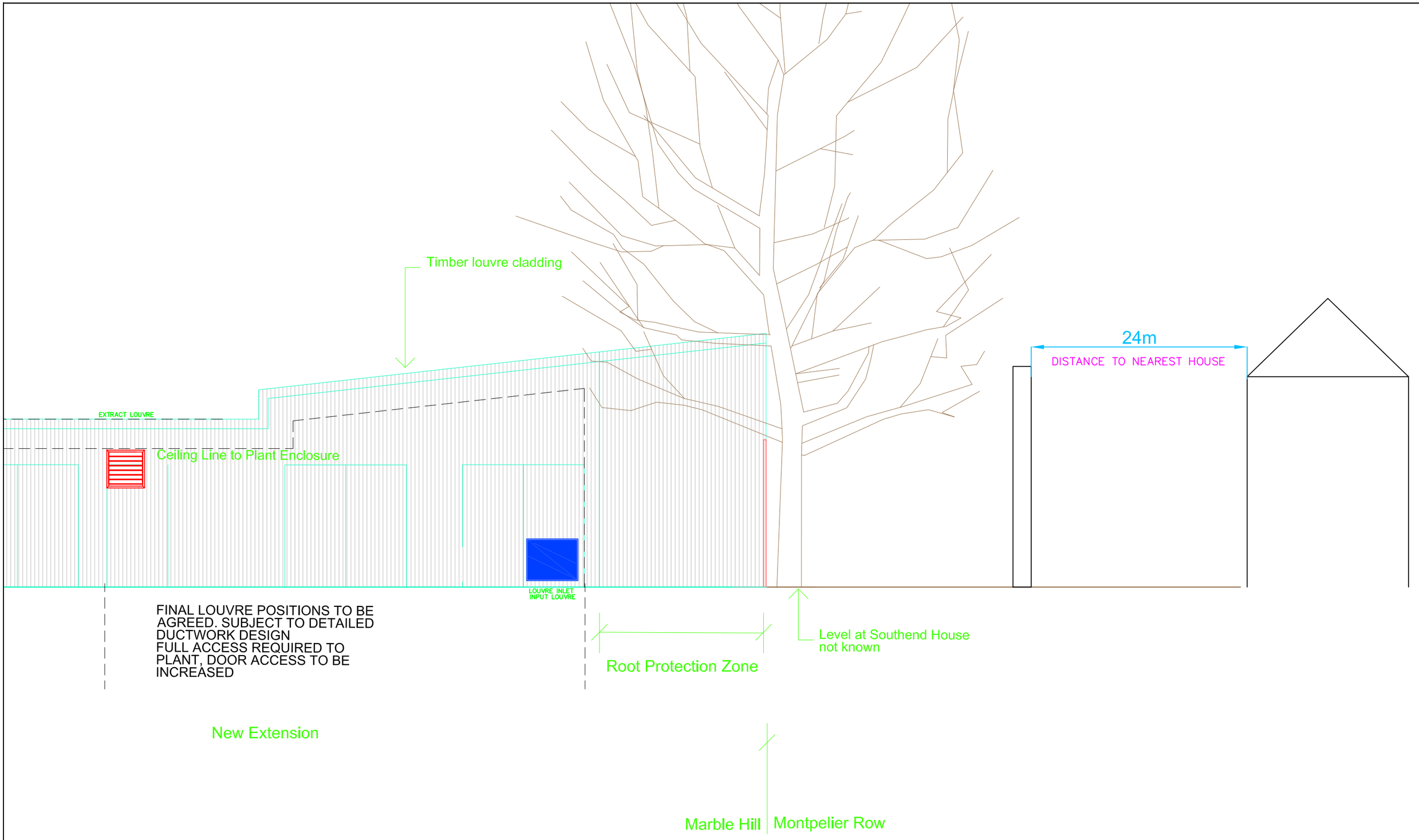
APPENDICES

01 Ventilation diagram and distance of receptors

02 Proposed kitchen plans with equipment

03 Proposed ventilation canopy and UV filtration

04 Proposed Fans



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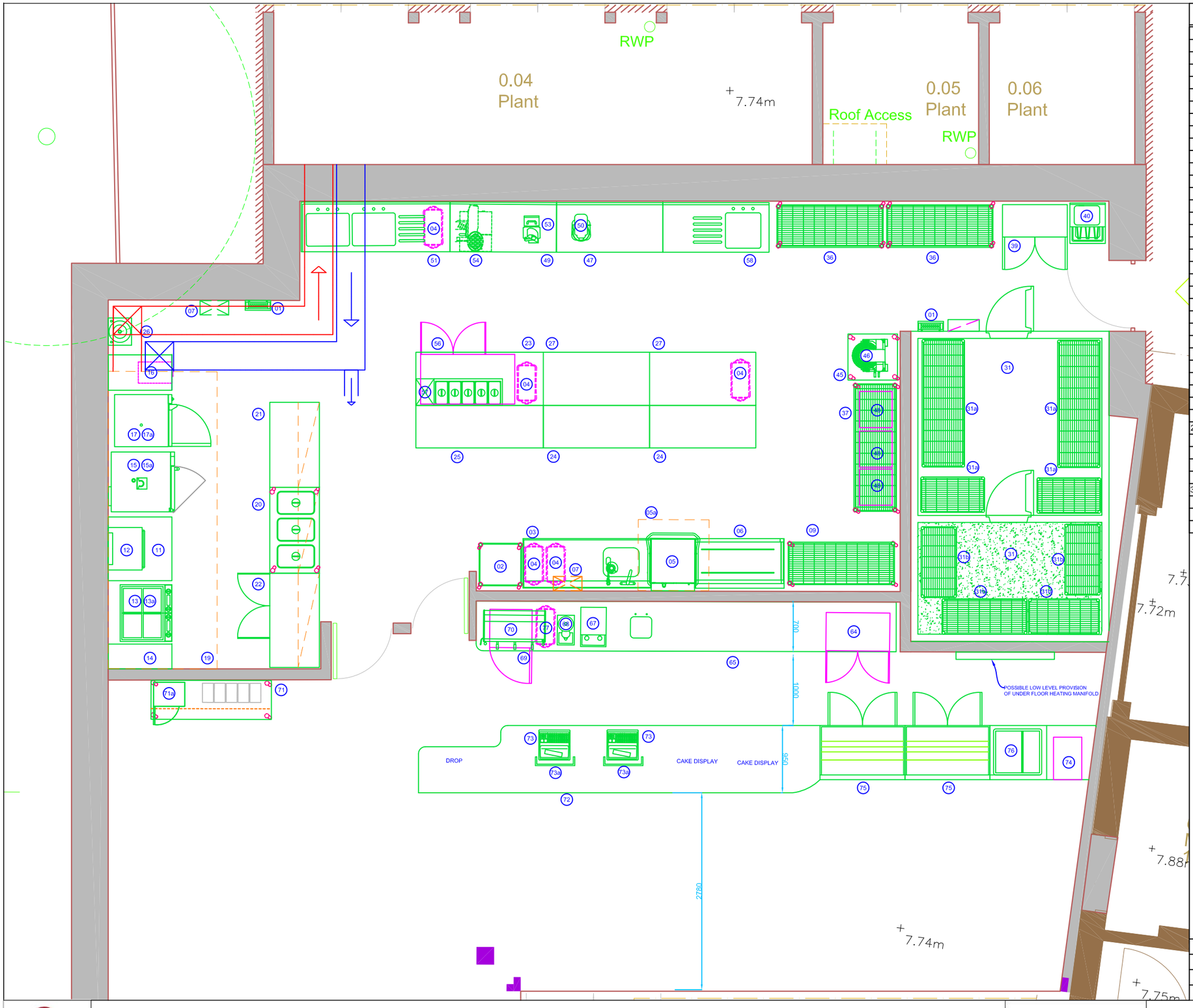
ENGLISH HERITAGE

MARBLE HILL		VENTILATION DIAGRAM DISTANCE OF RECEPTORS	
DRAWN	CHECKED BY	DATE	SCALE
-	SCC	15.03.17	NTS
DWG NO. C8_VENTILATION			REVISION. -



EQUIPMENT DESCRIPTION

01	INSECT CONTROL UNIT (x2)	37	DRY STORE RACKING
02	DUMP RACK	38	DELETED
03	INLET TABLING	39	COSHH CUPBOARD
04	WASTE BIN (x5)	40	JANITORIAL SINK
05	HOOD TYPE DISHWASHER	41-44	SPARE NO.
05a	CONDENSE CANOPY	45	ST/STL LOW LEVEL STAND (MOBILE)
06	OUTLET TABLING	46	20qt TABLE TOP MIXER
07	GREASE DOSING SYSTEM (x2)	47	ST/STL WALL TABLE
08	DELETED	48	INGREDIENT BINS (x3)
09	CLEANS RACKING	49	STAINLESS STEEL WALL TABLE
10	DELETED	50	5qt TABLE TOP MIXER
11	ST/STL WALL TABLE	51	ST/STL DOUBLE BOWL SINK
12	WALL HUNG GRILL	52	DELETED
13	4-RING INDUCTION HOB	53	VEGETABLE PREPARATION MACHINE
13a	STAND FOR INDUCTION HOB	54	SLICER
14	ST/STL WALL TABLE WITH DRAWER	55	DELETED
15	10-GRID COMBINATION OVEN	56	COUNTER REFRIGERATOR
15a	STAND FOR COMBINATION OVEN	57	SALADETTE UNIT
16	ST/STL WALL TABLE WITH DRAWER	57a	DELETED
17	CONVECTION OVEN	58	ST/STL SINGLE BOWL SINK UNIT
17a	STAND FOR CONVECTION OVEN	59-63	SPARE NO.
18	DELETED	64	UNDERCOUNTER BOTTLE COOLER
19	WALL TYPE CANOPY	65	BACK BAR WITH INSET SINK
19a	ST/STL WALL PANELS AROUND CANOPY	66	SPARE NO.
20	MOBILE HOT CUPBOARD WITH OVER SHELF	67	TWIN TAP WATER BOILER
21	ST/STL CENTRE TABLE WITH OVERSHELF	68	CLIENT SUPPLY: GRINDER
22	COUNTER REFRIGERATOR WITH OVERSHELF	69	MILK REFRIGERATOR
23	ST/STL CENTRE TABLE	70	CLIENT SUPPLY: 3-GROUP COFFEE MACHINE
24	ST/STL CENTRE TABLE (x2)	71	CONDIMENT PICK UP AND BABY UNIT
25	ST/STL CENTRE TABLE	71a	MICROWAVE
26	WASH HAND BASIN	71b	BABY FOOD WARMER (NOT SHOWN)
27	MOBILE ST/STL CENTRE TABLES (x2)	72	COUNTER
28-30	SPARE NO.	73	CLIENT SUPPLY: TILL UNIT (x2)
31	DUAL COLD ROOM AND FREEZER ROOM	73a	TILL SCREEN (x2)
31a	COLD ROOM RACKING	74	AMBIENT TRAY PICK UP
31b	FREEZER ROOM RACKING	75	MULTI-TIER UNIT (x2)
31c	REMOTE CONDENSING UNITS	76	ICE CREAM CONSERVATOR
32-34	SPARE NO.	77	WASTE BIN
35	DELETED	78	DELETED
36	DRY STORE RACKING (x2)		

D	14.03.17	REVISED TO UPDATED ARCHITECT'S DRAWING	MRZ
C	06.03.17	REVISED TO UPDATED ARCHITECT'S DRAWING	MRZ
B	09.01.17	REVISED TO VE 75m² KITCHEN SIZE	GLC
A	29.11.16	REVISED TO CLIENT COMMENTS	GLC

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MARBLE HILL

KITCHEN AND SERVERY EQUIPMENT LAYOUT

DRAWN	CHECKED BY	DATE	SCALE
GLC	SCC	18.10.16	NTS

DWG NO. CO-97-001

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