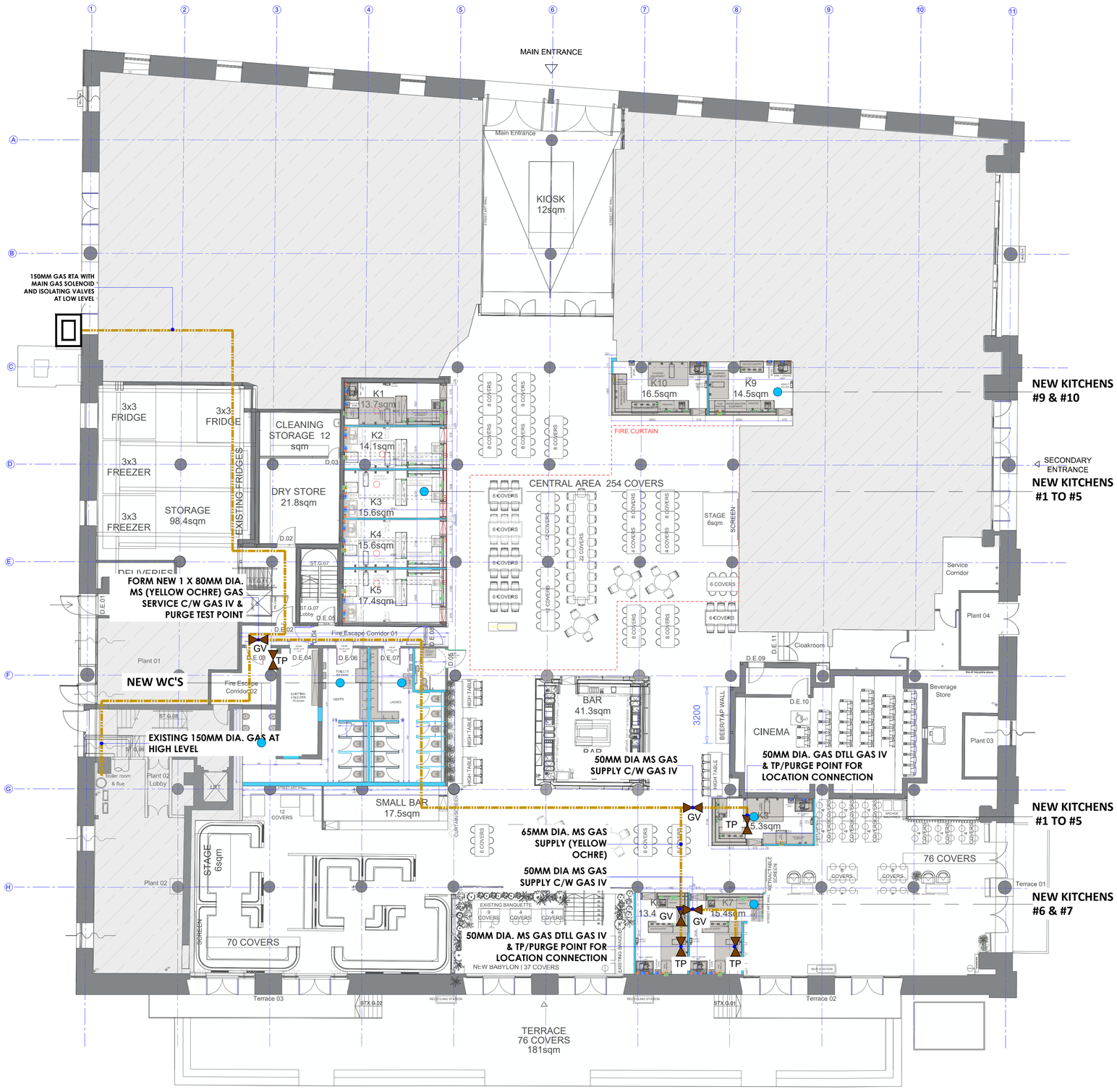

PROPOSED GROUND FLOOR PLAN

SCALE 1 : 100

NOTE: ALL NEW KITCHEN UNITS / WORKTOPS / AND SPECIALIST KITCHEN EQUIPMENT MUST MAINTAIN A MINIMUM 50MM GAP TO ANY ADJOINING WALL STRUCTURE

NOTE: THE LAYOUT INDICATED IS INDICATIVE. PLEASE REFER AT ALL TIMES TO KEENAN CONSULTANCY LATEST MECHANICAL AND ELECTRICAL DRAWINGS WHICH TAKE PRECEDENT AT ALL TIMES.

1:200 0 2 4 6 8 10 metres
1:100 0 1 2 3 4 5 metres
1:50 0 0.5 1 1.5 2 2.5 metres
1:20 0 0.2 0.4 0.6 0.8 1 metres

KEY:	
	60 MINUTES FIRE RATED CONSTRUCTION
	NEW CONSTRUCTION
WALL TYPE B: / WALL TYPE A:	CONSTRUCTION TYPE REF
	EXISTING STRUCTURE
	AREA NOT SURVEYED

GENERAL RECOMMENDATIONS FOR FIRE SAFETY IN CATERING ESTABLISHMENTS

COMPARTMENTATION:
Cooking should be undertaken using appliances located in compartments separated from other parts of the premises, by elements of structure providing at least 60 minutes fire resistance where practicable. Kitchens should have non combustible walls, floors and ceilings. Doorsets leading to other parts of the premises should also provide at least 60 minutes fire resistance; doors should be fitted with self closing mechanisms. Shafts such as dumb waiters should also be protected so as to provide 60 minutes fire resistance where practicable, with regard to the enclosure and openings, so as to maintain effective fire compartmentation.

Any gaps around services entering or leaving the kitchen should be filled with proprietary penetration seal/service opening passive fire protection systems, so as to provide at least the same level of fire resistance as the element of construction in which it is located.

Where necessary, any combustible surfaces should be replaced, overlaid or lined with non combustible material before installation of the cooking equipment. This material should at least be of Euro Class A2-s1, d0 as set out in BS EN 13501-1: Fire classification of construction products and building elements. Classification using test data from reaction to fire tests .

Staff should be made aware that care must be taken not to position trays of cutlery or other items beneath the shutter, and thus compromise its effectiveness in the event of a fire.

FIRE PROTECTION:
The kitchen should be protected by an automatic fire detection and alarm installation complying with BS 5839-1 (ref. 24), with suitable heat detectors being provided in the cooking areas.

Sprinklers, where present, should be installed by engineers with third party certification from a UKAS accredited third party certification body. The system should be in compliance with the LPC Rules for Automatic Sprinkler Installations incorporating BS EN 12845 (ref. 25).

As indicated in BS 5306-8 (ref. 26), in circumstances where a deep fat fryer has a surface area greater than 0.4m2, it should be protected by an automatic suppression system.

As well as providing an automatic fire suppression system to protect deep fat fryers, a suitable installation should be provided – with both manual and automatic operation to protect grilles, hobs, bratt pans, the overhead canopy and ducting system. In circumstances where extract ductwork runs are in excess of 5m in length and/or run internally, consideration should be given to installing suppression along the entire length of the ductwork.

Consideration should also be given to installing a suitable fire suppression installation where innovative or specialist cooking equipment is installed.

Upon activation of any fire extinguishing system for a cooking operation, all sources of fuel and electrical power that produce heat to all equipment requiring protection by that system should automatically shut off. This will ensure that the fire is suppressed and secured as the system was designed. Failure to disconnect the electrical power or gas supply to the protected equipment could lead to reignition of the fire due to continued heating instead of cooling of the overheated grease.

In the event of fire, exhaust fans in the ventilating system should be left on. The forced draft of these fans will assist the movement of the liquid agent through the ventilating system, thus aiding in the fire suppression process. These fans provide a cooling effect in the plenum and duct after the fire suppression has been discharged.

The choice of fixed fire suppression systems must be subject to a risk assessment undertaken by a competent person, and be suitable for the risk. Water-misting systems may be appropriate in certain circumstances to protect particular risks, but should not be used for long runs where there is potential for water-mist to condense and run back onto a cooking surface. Fixed fire suppression systems installed in kitchens should have been tested and approved to an appropriate standard (such as LPS 1223 (ref. 27)) and be installed by an engineer with third party certification – such as to the BAFE Kitchen Fire Suppression Systems Scheme SP206 (ref. 28) covering the design, installation, commissioning, recharge and maintenance of kitchen fire suppression systems from an independent UKAS accredited third party certification body.

It should be ensured that utensils, pots, pans and cooking materials are not stored in areas where they can obstruct the designed discharge pattern of the fire suppression system.

Before introducing changes to the layout of the cooking equipment, or other measures that may affect the basic configuration of the protected areas, it is important that the supplier/installer of the fire suppression equipment is consulted to review the system, and identify any additional measures that may need to be made.

A suitable number of appropriate portable fire extinguishers should be available and immediately accessible in the case of a fire. Such portable extinguishers should be approved and certificated by an independent, third party certification body and be installed in accordance with BS 5306-8: Fire extinguishing installations and equipment on premises. Selection and installation of portable fire extinguishers. Code of practice (ref. 26) – and inspected and maintained in compliance with BS 5306-Fire extinguishing installations and equipment on premises. Commissioning and maintenance of portable fire extinguishers. Code of practice (ref. 29).

Where a deep fat fryer is present the extinguishers provided in the cooking area should be type F as defined in BS EN 3-7: 2004 + A1: 2007: Portable fire extinguishers. Characteristics, performance requirements and test methods (ref. 30). A minimum of two of these extinguishers should be provided in the cooking area, each with a fire rating of numerical value equal to the volume of the oil in the largest pan (for example, a pan containing 25 litres of oil should be protected by two extinguishers each having a rating of not less than 25F).

Fire extinguishers should be located so that only suitable type F extinguishers are located in the vicinity of a deep fat fryer. This is to prevent an inappropriate extinguisher being selected for use in an emergency. In many cases this will result in only a type F extinguisher being present in the kitchen, with other extinguishers being located immediately outside. The situation should not arise where a member of staff moving from the fryer passes an inappropriate extinguisher (such as a carbon dioxide or water extinguisher) in order to reach a type F unit.

Where a fire blanket is provided, this should be to BS EN 1869 (ref. 31) and staff should be trained in its use.

All portable firefighting equipment should be easily and safely accessible.

Operators should be made familiar with the location of the main isolator or shut off valves, the operation and correct method of use of portable fire extinguishing appliances, and any fixed fire extinguishing system. They should also be instructed in the actions to take in the event of a fire or an escape of burning gas.

All staff should be made aware that an outbreak of fire involving burning gas should not be extinguished until such time as the gas supply has been shut off. All heat sources should be isolated before tackling a fire.

EXTRACTION SYSTEMS:
Kitchen ventilation systems should be designed, installed and maintained in accordance with the requirements of the BESA (Building Engineering Services Association) DW/172 Specifications for Kitchen Ventilation Systems (ref. 21) and TR19: Guide to Good Practice – Internal Cleanliness of Ventilation Systems (ref. 8).

Ducts, canopies, extract plenum and hoods should be constructed of (and be supported by) galvanised or stainless steel of a substantial gauge, having all seams and joints liquid tight, with smooth surfaces to facilitate cleaning. Spiral ducting is only suitable for the extraction of combustion products, and not for the extraction of oil/fat fumes and steam, as its construction can allow condensed liquid to leak from the joints that run its entire length. Ducts should not be constructed from aluminium because of the low melting point of this material.

Extract ducting should be as short as practicable, and the design should comply with any local byelaws. The duct should preferably pass directly to the open and should not pass through, or be contained within, floor or ceiling voids, or roof spaces where exposed combustible materials are present. Ducts should not pass through fire compartment walls or floors.

Where ducts pass through any combustible material, it should be cut away for a distance of at least 150mm from the duct, and the space filled with a proprietary sleeving system or non combustible insulation. Ducts, hoods and canopies should have a clearance of at least 150mm from combustible material, including combustible partitions and floors, and – where necessary – the space should be filled with non combustible insulation. Work should be undertaken by competent persons with third party certification from a UKAS accredited third party certification body.

COMPLIANCE WITH FIRE SAFETY LEGISLATION:
A suitable and sufficient fire risk assessment should be undertaken by a competent person for all premises to which the Regulatory Reform (Fire Safety) Order 2005 3), or equivalent legislation in Scotland and Northern Ireland (refs. 4-7), applies. The assessment should include the cooking process and areas occupied by members of the public and staff.

The risk assessment should consider the good practice set out in RC48 Arson Prevention (ref. 32) together with the potential for an arson attack from sources within or outside the business. Where necessary, suitable preventive or protective actions should be identified and implemented to protect both the main premises together with any outbuildings, such as timber sheds used to store stocks of unused and waste oil.

Where fire risk assessments or other forms of expert fire safety advice or guidance are sought, a competent, experienced person with a form of professional recognition should be engaged to carry out the task. Wherever possible, all fire safety products purchased should be manufactured to an appropriate standard and carry relevant markings. Systems (such as automatic fire detection and alarm systems) should be installed to recognised standards by installers approved by an accredited third party certification or approvals body

As part of the fire risk assessments undertaken to comply with fire safety legislation the good practice set out in BESA Guide TR19 Grease (ref. 8) should be considered and a specific assessment of the extract ventilation should be undertaken based on the guidance provided in RC44 (ref. 2)

Where LPG cylinders or hazardous substances are stored, an assessment will also need to be undertaken in accordance with the Dangerous Substances and Explosive Atmospheres Regulations 2002 (DSEAR) (ref. 9). Further advice on safe use and storage can be found in RC8 The storage, use and handling of common industrial gases in cylinders including LPG (ref. 10).

The response by fire and rescue services to 999/112 calls and signals routed via fire alarm monitoring organisations varies widely throughout the UK, and differs from day to night time. Fire safety managers should refer to the relevant fire and rescue service websites to make themselves aware of the levels of response in the areas in which their premises are located, and consider this information when undertaking and reviewing fire risk assessments.

NOTICE OF COMMENCEMENT
A notice of commencement is to be submitted to Building Control within 5 days of work being regarded as commenced, under regulation 16 of The Building Regulations etc. (Amendment) (England) Regulations 2010.

Work will be deemed to have commenced when the build has progressed to at least one of the following:

For complex buildings – Foundations are constructed, and the structure of the lowest floor level is complete.
For new buildings and horizontal extensions - Sub surface structure of the building or the extension including all foundations and the structure of the ground floor level is completed.
For all other works – constructed 15% of the overall work.

NOTICE OF COMPLETION
A Notice of Completion to be given to Building Control not more than 5 days after the work has been completed. The notice to contain the following information:
- The name, address, telephone number and (if available) email address of the client, principal contractor, and principal designer.
- A statement from the applicant to say that the works have been completed and complies with all the applicable regulations to the best of their knowledge.
- A statement from both the principal contractor and principal designer to confirm they have fulfilled their duties under Part 2A (duty holders and competence).

CDM REGULATIONS 2015
The client must abide by the Construction Design and Management Regulations 2015. The Client must appoint a Contractor, if more than one Contractor is to be involved, the Client will need to appoint (in writing) a Principal Designer (to plan, manage and coordinate the planning and design work), and a Principal Contractor (to plan, manage and coordinate the construction and ensure there are arrangements in place for managing and organising the project).

Domestic Clients
The Domestic Client is to appoint a Principal Designer and a Principal Contractor when there is more than one Contractor, if not your duties will automatically be transferred to the Contractor or Principal Contractor.

The Designer can take on the duties, provided there is a written agreement between you and the Designer to do so.

The Health and Safety Executive is to be notified as soon as possible before construction work starts if the works:

(a) Last longer than 30 working days and has more than 20 workers working simultaneously at any point in the project.
Or;
(b) Exceeds 500 person days.

THERMAL BRIDGING
Care shall be taken to limit the occurrence of thermal bridging in the insulation layers caused by gaps within the thermal element, (i.e. around windows and door openings). Reasonable provision shall also be made to ensure the extension is constructed to minimise unwanted air leakage through the new building fabric.

MATERIALS AND WORKMANSHIP
All works are to be carried out in a workmanlike manner. All materials and workmanship must comply with Regulation 7 of the Building Regulations, all relevant British Standards, European Standards, Agreement Certificates, Product Certification of Schemes (Kite Marks) etc. Products conforming to a European technical standard or harmonised European product should have a CE marking. The latest edition of the British Standard (including any amendments) applies to any undated references within these specifications.

C2. CONDENSATION
Walls, floors and roof of the building to be designed and constructed so that their structural and thermal performance will not be adversely affected by interstitial condensation, surface condensation or mould growth. Account to be taken of the building's form and orientation in relation to topography, prevailing winds, sunlight and over-shadowing, and the rate at which humidity is generated.
Materials with the highest vapour resistance should be located on the warm side of a thermal element. VCLs to be provided where necessary.
The junctions between elements are designed to Accredited Construction Details or guidance of BRE IP17/01] and BS 5250:2021 Management of moisture in buildings to be followed.

ELECTRICAL
All electrical work required to meet the requirements of Part P (electrical safety) must be designed, installed, inspected and tested by a Competent Person registered under a Competent Person Self Certification Scheme such as BRE certification Ltd, BSI, NICEIC Certification Services or Zurich Ltd. An appropriate BS7671 Electrical Installation Certificate is to be issued for the work by a person competent to do so. A copy of a certificate will be given to Building Control on completion.

Notes

ICE Arch Ltd take no responsibility for any dimensions obtained by scaling from this drawing. If no dimension is shown the recipient must ascertain the dimension specifically from the Architect or by site measurement. Supplying this drawing in digital form is solely for convenience and no reliance may be placed on digital data. All data must be checked against hard copy. Dimensions must be checked on site. Any discrepancies must be reported to the Architect immediately.

All dimensions and conditions are to be checked on site by the contractor prior to commencing any work. The contractor is responsible for checking that there is no conflict between site dimensions and drawn dimensions.

Drawings to be read in conjunction with Structural Engineer's, Mechanical and Electrical Engineer's, Specialist Manufacturer's and Sub-contractor's drawings and specification.

These drawings have been prepared without the benefit of exposing underlying construction and therefore assumptions have been made. Prior to commencement the contractor must contact ICE Arch Ltd to agree the necessary scope of investigation works, to confirm on site conditions. It should be noted that the results of these investigations may require the drawings and structural design to change.

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NOTE: PLANS TO BE READ IN CONJUNCTION WITH STRUCTURAL ENGINEER'S, M&E ENGINEER'S, LANDSCAPE ARCHITECT'S AND SPECIALIST SUPPLIERS/ MANUFACTURER'S DRAWINGS AND DETAILS

NOTE: DO NOT SCALE OFF THIS DRAWING. ALL DIMENSIONS AND SETTING OUT TO BE CONFIRMED PRIOR TO WORK COMMENCING. DIMENSIONS DO NOT INCLUDE PLASTER UNLESS REFERRED TO AS 'FINISHED'. FIGURED DIMENSIONS TO BE FOLLOWED IN PREFERENCE TO SCALE.

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Drawing
PROPOSED GROUND FLOOR GAS SUPPLY LAYOUT

Drawn by:	Scale:	Drawing Number	Drawing Revision
AT-S	1:100 @ A1	250505:1002	BR5
Checked by: -	Date: SEPTEMBER 2025		