Hub by PREMIER INN

CAMDEN HIGH ST SPECIFICATION FOR A TURNKEY DEVELOPMENT

24th July 2018 - Edition Rev D

NOTE:
THE HUB BY PREMIER INN TURNKEY SPECIFICATION IS TO BE READ IN CONJUNCTION WITH WHISDOM WWW.WHISDOM.CO.UK CURRENT AS THE DATE OF AGREEMENT

VERSION	CHANGES	DATE
Revision A	Changes as tracked	16th February 17
Revision B	Changes as tracked	1st October 17
Revision C	Changes as tracked	1st October 17
Revision D	Changes as tracked • Break Glass to Main Entrance Doors added where on a FE route • Note added regards pod pipework to be copper • Note added regards temp gauges on DHWS / BCWS and sentinel points • Note added regards Baxi to commission water heaters to maintain 2 year warranty • Note added regards location of LEV kit located in corridor • Note added regards ventilation to the Dry Goods Area / Fridges & Freezers • Electric Heating Note Amended • PV Output changed to 300 w/m2 • Cause & effect Matrix Amended • Protec to Commission & Demo Fire Alarm System Added • Note added regards Disabled Refuge active at all times and audible during fire situation	26th March 18

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GUIDANCE NOTES TO DEVELOPERS

A. Scope of document

This document, together with all enclosures referred to herein and the following lease drawings, sets out and illustrates the minimum requirements for a typical hub by Premier Inn.

The guidance notes are intended to assist in the preparation of the Turnkey Specification in conjunction with:

- Agreement for lease
- Lease drawings
- Hub by Premier Inn technical information as displayed on Whisdom, www.whisdom.co.uk

The developer should adapt this document in accordance with the requirements of their particular development criteria. All changes to the document should be tracked and submitted to the hub by Premier Inn appointed consultant for comment/approval.

The final version of the specification should be dated in accordance with the date of the final agreement.

The agreement for lease will detail the process for the delivery obligation of the developer and their consultants and will take precedence over any item listed in these guidance notes.

B. Hub by Premier Inn Consultants

Whitbread will appoint relevant consultants as advisors who may be contacted to seek clarifications of any areas of uncertainty.

For the purposes of this document any reference to hub by Premier Inn is to be deemed to include all consultants and agents that may be appointed by Premier Inn for the project.

C. Developer Consultants

The Developer is required to appoint competent consultants prior to exchange to advise him on all aspects of the development through to project completion. This is inclusive of the appointment of an M & E consultant to assure hub by Premier Inn, that the requirements of the hub by Premier Inn specification in respect of the design of the Building Services installations may be met.

It is also important the design of the Building Services installation is in place early enough such that any planning consent obtained will enable the performance requirements of the specification to be achieved.

D. Hub by Premier Inn Documentation

The Developer (or their consultants) will be provided with access to the Whisdom website (www.whisdom.co.uk). This contains all standard drawings, details and other relevant information essential for the successful delivery of the project. The dates of the agreement will effectively “freezes” the details contained within Whisdom specific to the individual project. Any subsequent changes to the information contained within Whisdom will be listed as a change notification and deemed to be outside of the agreement for the individual project. The change notification will also be emailed to all password recipients but should not be treated as a request for tenant’s variations: this will be dealt with later and is specifically governed by under the terms of the Agreement for Lease.

Change orders automatically generated by Whisdom after the date of the Agreement for Lease should not be incorporated without prior consent from Whitbread Premier Inn.

All documentation provided by hub by Premier Inn (including Whisdom content) is to be regarded as confidential. The developer must take all necessary measures to ensure that documentation remains confidential and is only used in connection with the project for procurement of the Works. All documentation must be returned to hub by Premier Inn on completion.

E. Hub by Premier Inn Model Requirements

The accommodation provided by the developer is to comply in all respects with the hub by Premier Inn model requirements as detailed on Whisdom.

Should the developer wish to deviate from the requirements of Whisdom then specific note should be made of this on the drawings accompanying the agreement for lease documentation.

Where the developer proposes to provide any bedrooms which vary from the Hub by Premier Inn model then full layout plans are to be submitted at a scale of 1:50 (dimensioned with furniture layout) to Whitbread for formal approval prior to inclusion in the agreement for lease documentation.

F. Schedule of accommodation to be provided

Standard Bedrooms

A schedule of rooms and room types is to be incorporated in the drawings appended to the Agreement of Lease.

Universal Access Rooms

1 per 20 rooms or part thereof number of universal access bedrooms with ensuite wheel chair access bath or shower rooms, split 50/50 (as further detailed in Whisdom). No rooms allowed below Ground Level. Preference is for all UA rooms to be located on the ground floor where possible.

Bedroom Corridors

Corridor widths are to comply with information to be found on Whisdom and the requirements of the Building Regulations. There are to be no steps within corridors adjoining bedrooms.

Linen/Cleaners room

One linen room is required on all floors. The size and layout of the room is to be in accordance with Whisdom and free from encumbrances.

Main staircase serving all floors being front of house specification

Passenger lift(s) serving all floors

Refer to item 2.10 of this Specification.

Foyer and reception area providing:

- Lobbied customer entrance
- Office
- Luggage store
- Main staircase and passenger lifts
- Reception check-in area
- Waiting
- Reception Comms Unit / Tower

Back of house area providing:

- Kitchen
- Goods store
- Staff Team Room
- Staff WCs
- Staff Changing area
- Delivery level linen storage provision

Front of house area providing:
- Bar / F&B Servery
- Bar seating area
- Breakfast buffet area
- Restaurant seating area
- Fixed furniture and screens as specified in Whisdom

Plant Areas
- Tanks & Boosters
- Gas Fired Hot Water Heaters
- External Condenser Plant
- External Kitchen Ventilation Plant

Communications Room

External areas which will provide the following:
- Car parking - number of spaces to be agreed with hub by Premier Inn on a site by site basis
- Service vehicle access, parking and turning for a minimum of a 16.5m long by 2.65m wide by 4m high articulated delivery vehicle, for which road construction should allow for a wheel point load of 6 tonnes
- Fire Service vehicle access, parking and turning (pumped appliances of note require 12.5 tonne road carrying capacity)
- Footpaths, ramps and landings as necessary
- 1.2m wide level access is to be provided for delivery trolley
- External areas for siting condensers, satellite receivers and aerials and all items of plant necessary to fulfil the requirements of this specification
- Refuse bin enclosure of a size suitable for refuse and recycling bins as determined by the 'Matrix for bin combinations' on Whisdom and screened to prevent views by guests and ensure no issues with noise or smells. Not stored against the fabric of the main structure and remote from smoking areas
- Fences to boundaries with adjoining owners
- External seating areas
- Guest drop/taxi location
- Designed and designated external smoking shelter provision

Service lift(s) serving specified floors (site specific as may be required by Premier Inn)
Refer to item 2.10 of this Specification.

The developer (or their consultants) is to submit to Whitbread a full set of General Arrangement drawings incorporating all of the accommodation previously listed adapted to suit the parameters of their specific project.

These should include the following:
- Plant locations – VRF (Condensers etc.)
- Condenser position (Whitbread supply) for refrigeration etc.
- Kitchen supply / extract ductwork routes / locations, positions of fire rated access hatches, including locations of termination to atmosphere
- Vehicle turning circles (see later guidance notes)
- Plant flue routes / locations including, locations of termination to atmosphere

G. Clear floor to ceiling heights

The following clear and unobstructed floor to ceiling heights are to be provided for:

Bedrooms / Linen Rooms	- 2.4 m
Bedroom corridor	– 2.25 m
Bar / Restaurant / Rreception / Foyer	– 2.4 to 2.7m (various levels as Whisdom)
Kitchen	– 2.4m
Back of house areas	– 2.4m

Adequate provision must be made for distribution of services within ceiling voids

H. Planning approval

The specific obligations of the developer are dealt with under the terms of the agreement for lease.

The developer is to ensure approval from Whitbread to all model requirements and brand standards prior to submission for planning.

All planning documents are to be approved by Whitbread prior to application. Once approved all planning conditions and the proposals to satisfy are to be signed off by Whitbread, not to be unreasonably withheld

Whitbread's consultants will prepare a signage and external feature lighting scheme based on the developers proposed elevations in order that the final proposals may take this into account in the drawings submitted for planning approval.

The developer is to notify hub by Premier Inn of any conditions relating to the statutory consents and approvals that may affect hub by Premier Inn operations in any way.

Hub by Premier Inn will be responsible for obtaining planning approval for external signage.

I. Building regulations approval

The specific obligations of the developer for obtaining Building Regulation approval are dealt with under the terms of agreement for lease.

Where required, Whitbread can provide assistance either through Whisdom or their consultants in the developers' obligations to satisfy the requirements of Building Regulations. In particular with regard to fire strategy, Whitbread may need to advise management procedures in association with the preservation or evacuation.

The developer will be responsible for determining the Energy Performance Classification for the completed building in accordance with statutory criteria and provide a certificate detailing the Building Energy Performance

J. Licensing

The specific obligations of the developer with regard to licensing are dealt with under the terms of agreement for lease.

The developer is to provide licensing drawings required in connection with the application for the Premises Licence. These may be prepared in conjunction with the Whitbread project team to ensure licensing application is made as early as possible.

K. Standards

The standards governing the development are dealt with under the terms of the agreement for lease.

L. Warranties

The obligations of the developers (and their consultants) are dealt with under the terms of the agreement for lease.

M. Professional Indemnity Insurance

The obligations of the developers (and their consultants) are dealt with under the terms of the agreement for lease.

N. Programme

The specific obligations of the developer are dealt with under the terms of the agreement for lease. However, the Developer is expected to provide hub by Premier Inn with a pre-contract programme as soon as is reasonably practicable.

The Developer will provide hub by Premier Inn with a construction programme a minimum of 4 weeks before works are due to start on site.

The developers programme must show the following items:

a. Date for completion of the sample bedroom and bathroom

b. Services live dates to include gas, water, electricity, telephones and drainage

c. Inspection dates for each area of the development with sufficient time for making good snagging items. If any off site construction e.g. bathroom pods, are being used they must also be available for inspection

d. Dates for installation/fixing of directly supplied and supply and fix items

e. Critical dates for approval/comment by Premier Inn of samples, drawings and information

The developer will advise hub by Premier Inn of any delays and provide full information in respect of any extensions of time applied for under the building contract.

The developer will provide hub Premier Inn with an assessment of building Contract progress and an updated programme at monthly intervals.

This will be inclusive any lead design consultants and specialist sub-contractor reports, warranties, procurement packages and M&E in detail. A tracker for the discharge of planning conditions (s106, s278, BREEAM & general pre-occupation) will be issued with each report.

O. Information to be provided by the developer

Hub by Premier Inn and their representatives are to be given full access to all design documentation upon request.

The developer is to provide hub by Premier Inn with the following information in accordance with an agreed information release and approval schedule or as reasonably requested by hub by Premier Inn:

- Planning approval notices and copies of the approved drawings
- Written confirmation from the local authority planners that all planning conditions requiring submission and approval of supplementary information have been discharged
- Designer risk assessments and hazard summaries
- Detailed construction programme
- Copies of all architectural and engineering working drawings, including:
- Site plan showing all hard and soft landscaping, boundary treatments, finished levels, underground drainage and service routes
- General arrangement plans, sections and elevations at a minimum scale of 1:100
- Detail sections through internal and external walls, roof and floors at a minimum scale of 1:20 detailing all external facing materials and roof coverings
- Drawings detailing setting out of the site and building including all internal partition walls, lift shaft, riser ducts etc.
- An acoustic report which demonstrates that the level of external noise intrusion into the hotel will comply with the criteria set down elsewhere in this specification. It is expected that the report will include measured, statistical and frequency based noise level data for the site measured over a period of at least 24 hours. It will consider all relevant sources of external noise and provide details of the sound insulation performance requirements of the various construction elements in order to achieve the specified criteria
- Soil investigation report and contamination survey

- Refuse disposal arrangements
- On mixed use schemes details of the extent of each demise

See also information requirements relating to handover

P. Hub by Premier Inn approvals

The obligations of the hub by Premier Inn consultant team in terms of the approval of documentation prepared by the developer is dealt with under the terms of the agreement for lease. Generally however Post Exchange of contracts a minimum of 5 working days should be allowed for comment/approval by the hub by Premier Inn team.

Sample bedroom/bathroom:

The Developer is to prepare for approval a sample bedroom and bathroom fully finished including all fixed furniture, carpets, lighting, sanitary and brassware for approval by Premier Inn in accordance with a programme to be agreed with hub by Premier Inn.

Sample bedroom window:

The Developer is to provide for approval, at the contractor's site accommodation, a sample bedroom window, fully operational, glazed and with all ironmongery a minimum of two weeks in advance of when the same is required to be ordered. There is to be a glazing replacement strategy agreed with hub by Premier Inn that does not require scaffolding. See item 2.4.1 of this Specification.

Q. Drawings and production information:

The developer is to submit for approval/comment the following drawings and calculations, in agreed format, showing compliance with hub by Premier Inn model requirements

ARCHITECTURAL / STRUCTURAL DRAWINGS

- Site plan/External works layouts showing (where applicable) all car parking, service vehicle access arrangements, service yards, car park lighting, electricity sub stations, drainage pumping stations/treatment plants, external bin enclosures, hard and soft landscaping (1:100 min)
- Site services layouts showing routes of all incoming services, service ducts, and foul and surface water drainage. (1:100 min)
- Dimensioned general arrangement plans of all floors, sections and elevations (1:100 min)
- Service layouts / schematics / reflected ceiling plans for all floors (1:100 min)
- Bedroom and bathroom layouts and internal elevations showing all fittings and furnishings including those provided by the Premier Inn (1:20 min)
- Main stair layout and handrail/balustrade details (1:20min)
- Escape stair(s) layout and handrail/balustrade details (1:20min)
- Linen room layouts and internal elevations (1:20min)
- Staff room and staff changing and w/c facilities layouts and internal elevations (1:20min)
- Plant room layouts and internal elevations (1:20min)
- External plant locations, schematics and layouts (1:20min)
- Office layouts and internal elevations (1:20min)
- Glass wash layouts and internal elevations (1:20min)
- Beer Store/beer store layouts and internal elevations (1:20min)
- Kitchen layouts and internal elevations (1:20min)
- Kitchen ventilation ductwork indicating all access hatch locations. (1:20min)
- Bar servery layout and details (1:20min)
- Customer toilets layouts and internal elevations (1:20min)
- Reception area layout and elevations (1:20min)
- Bar/restaurant layout and elevations (1:20min)
- Restaurant fixed screen and seating details (1:20min)
- Finishes schedules for all areas
- Schedule of external materials and finishe
- Door and ironmongery schedules

- Window schedules
- Fire strategy layouts

MECHANICAL SERVICES DRAWINGS
(Developers M&E Consultant to review prior to submission to Whitbread's Consultant Team)

- Incoming Gas & Water Services (1:100 min)
- Plant Room Layouts & Elevations (1:20 min)
- Gas Schematic (NTS)
- Domestic Services Schematics (NTS)
- Air Conditioning Schematics Inc. ASHP Boilers etc. (NTS)
- Other Renewable Schematics i.e. CHP etc. (NTS)
- Domestic Services Plans to all areas (1:50 / 1:100 min)
- Ventilation Plans / Sections / Elevations (1:50 min)
- Detailed Kitchen Extract & Supply installation Drawings including Plans / Sections & Elevation with full detailed access doors etc. (1:50 min)
- Air Conditioning Floor Plans Inc. AC Pipework / Condense Routes etc. (1:50 min)
- External & Roof Plant Layout Plans (1:50 min)
- Fixing & Support Details (1:20 min)
- External & Roof Plant Support Details including AHUs & Condensers for approval by Acoustic Consultant (1:20 min)
- Weathering Details (1:20 min)
- Detailed Sections Inc. Corridors etc. (1:20 min)
- Coordinated Mechanical & Electrical Reflected Ceiling Plan (1:50/100 min)

MECHANICAL SERVICES CALCULATIONS
(Developers M&E Consultant to review prior to submission to Whitbread's Consultant Team)

- SBEM & Overheat Calculations
- Part L Compliance Checks including Fan calculations etc.
- Renewable Energy Contribution Calculation
- BREEAM EPRNC
- Other BREEAM Related Mechanical Submissions
- Heat Loss Calculations (All Areas)
- Heat Gain Calculations (All Cooled Areas)
- Pipe Sizing Calculations (Domestic / Drainage)
- Ventilation Calculations (Bar / Restaurant / Kitchens / Stores / Offices / Staff Areas / Bedrooms / Bathrooms etc.)
- Ventilation Calculations (Bedrooms / Bathrooms etc.) – Central Extract
- Fan Sizing Calculations
- Hot Water Plant Sizing & Secondary Pumps
- Tanks & Booster Sizing
- EN 378 Calculations
- ECA
- Acoustic Criteria Compliance

MECHANICAL SERVICES PLANT SUBMISSIONS
(Developers M&E Consultant to review prior to submission to Whitbread's Consultant Team)

- Tanks
- CHP & Hot Water Storage
- Gas Fired Hot Water Heaters
- Flues
- ASHP DX Systems
- ASHP Boilers & Hot Water Storage
- Pipework Systems (Hot & Cold Water / Drainage)

- Pumps – booster set and any circulation pumps
- Grilles
- Air Handling Units
- Other Ventilation Plant
- Attenuators
- Fire Collars & Dampers
- Smoke Dampers
- Pipework Insulation (including all valves and accessories)
- Ductwork Insulation
- Plant Supports
- Odour Control Plant (If Applicable)
- Smoke Vent (If Applicable)
- Sprinklers (If Applicable)

ELECTRICAL SERVICES DRAWINGS
(Developers M&E Consultant to review prior to submission to Whitbread's Consultant Team)

- Incoming Elec & Comms Services (1:100 min)
- LV / Plant Room Layouts & Elevations (1:20 min)
- LV Schematic (NTS)
- Other Renewable Schematics i.e. PV etc. (NTS)
- Lighting & Emergency Lighting Drawings / DBs / Circuits / Switch / Dimming Arrangements.(1:50/100 min)
- General Power Drawings / Circuit Refs / DBs / Consumer Units etc. (1:50/100 min)
- Fire Alarm Layouts (1:50/100 min)
- Security / CCTV Layouts / Coordination / Power Requirements etc. (1:50/100 min)
- TV / RF Network layouts / Coordination / Power Requirements etc. (1:50/100 min)
- Tel / Data Layouts / Coordination / Power Requirements etc. (1:50/100 min)
- AV Layouts / Coordination / Power Requirements etc. (1:50/100 min)
- External Lighting & Power Layouts including Bldg. & Car Park Signage / Barriers etc.(1:100 min)
- External & Roof Layout Plans (1:50 min)
- Fixing & Support Details (1:20 min)
- Weathering Details (1:20 min)
- Detailed Sections Inc. Corridors etc. (1:20 min)
- Coordinated Mechanical & Electrical Reflected Ceiling Plan (1:50/100 min)

ELECTRICAL PLANT SUBMISSIONS
(Developers M&E Consultant to review prior to submission to Whitbread's Consultant Team)

- Main LV Panel
- DBs & Equipment
- Accessories
- Internal Lighting & Emergency Lighting
- External Lighting
- Fire Alarms including Cause & Effect Statements
- Disabled Refuge
- Disabled Assistance Alarm
- Lightning Protection
- Renewables i.e. PV where applicable
- Backup Generators (If Applicable)

ELECTRICAL SERVICES CALCULATIONS
(Developers M&E Consultant to review prior to submission to Whitbread's Consultant Team)

- SBEM & Overheat Calculations

- Part L Compliance Checks including Luminous Efficacy Calculations etc.
- Light Level Calculations (Non PI Standard Areas) – Internal
- External Lighting Calculations
- Other BREEAM Related Electrical Submissions
- Lightning Protection Risk Assessment
- Renewable Energy Calculations
- Cable Calcs/ Voltage Drops
- Detailed Load Assessment
- Fire Alarm Audibility

R. Information to be provided by hub by Premier Inn

The developer is to issue a schedule of all information required from Whitbread to facilitate the design and construction of the developer's works and is to allow reasonable timescales for the provision of such information.

S. Inspection of developer's works

The obligation of the developer in allowing hub by Premier Inn and its consultant's access for inspection are detailed in the agreement for lease. The developer is also required to obtain detailed photographic evidence of fire stopping and provide this to Whitbread upon request. Any off site construction e.g. bathroom pods, must also be made available before full manufacture commences.

T. Practical completion and handover

The obligations of the developer in relation to practical completion are detailed in the agreement for lease. The developer will be responsible for arranging a full window clean, internally and externally, for all windows & glazing to take place between PC and opening. A full clean of the building is also required prior to PC, this is not to be just a builders clean.

U. Defects liability period

The obligation of the developer in terms of the defects liability period and the rectifying of any defects or remedial works are dealt with through the agreement for lease.

V. Variations and additional works

The obligation of the developers with regard to variations to the work and additional works are dealt with under the terms of the agreement for lease. Change orders automatically generated by Whisdom after the date of the Agreement for Lease should not be incorporated without prior consent from Whitbread.

W. Deleterious Materials

The obligations of the developer are dealt with under the agreement for lease. There will be no asbestos allowed to remain on any sites even if encapsulated

X. Site sign boards

The obligations of the developer will be dealt with under the agreement for lease, but a general hub by Premier Inn temporary signage will need to be created during the course of the construction in a position to be agreed and supplied by the developer.

Y. Services

The obligations of the developer are dealt with under the terms of the agreement for lease.

The Developer shall ensure that any plant is positioned so as to prevent visual and sound intrusion to the occupants of the hub by Premier Inn.

All main services risers and access provisions to them are to be shown on drawings appended to the agreement lease and approved by Whitbread.

Z. Post Completion

Developer to provide 3no 6 yard skips post PC for fit out waste. Developer to provide joiner attendance post PC (for fixing loose fixable items). Developer to provide

mechanical and electrical attendance at 3 Dry Run nights on which hub by Premier Inn will supply accommodation FOC for the attendees.

SECTION ONE – GENERAL REQUIREMENTS

1.1 Overview

This document, together with all enclosures referred to herein and the following lease drawings, sets out and illustrates the minimum requirements for a typical hub by Premier Inn.

This document should be read in conjunction with the following:

- The Agreement for Lease
- The Drawings attached to the Agreement for Lease
- Hub by Premier Inn technical information as displayed on Whisdom www.whisdom.co.uk dated 24th July 18
- Postcode – XXXXXX
- Restaurant and Kitchen Type (as referred to on Whisdom)

Change orders automatically generated by Whisdom after the date of the Agreement for Lease should not be incorporated without prior consent from Whitbread.

1.2 Maintenance, Maintenance Access and Plant/Equipment Positions

The Developer shall be responsible to ensure that all plant and equipment including access hatches etc. is provided with suitable access for maintenance as detailed under section 4.1.4. The Developer shall also provide a Plant Replacement Strategy for all items of plant and equipment which shall include method statements for approval by Whitbread. Faulty plant equipment should be replaced within a maximum of 2 weeks of an issue arising requiring replacement equipment.

Maintenance & Defects Liability

The defects liability period covering all materials, workmanship etc. will be for twelve months from the date that the Works are handed over to the Employer.

Maintain the works, at no cost to the Employer, to the CA's satisfaction, during the progress of the works and until the CA has issued a certificate of Practical Completion for the works.

The developer is to be responsible for planned servicing and maintenance and reactive emergency issues of all Building Services equipment, including specialist systems (such as smoke ventilation systems and CHP), during the twelve months Defects Liability Period. This period will commence from practical completion of the Works.

Provide a definitive schedule and programme of maintenance and servicing to be undertaken by the developer and a schedule of housekeeping activities that need to be carried out in order that the warrantee provisions do not become invalid.

Where fire engineered solutions are installed, provide a separate detailed matrix of the equipment on site along with the maintenance actions required on a daily, weekly, monthly, quarterly and annual basis, separating out the items that are undertaken by the hotel and those requiring a specialist contractor.

Ensure planned Maintenance is carried out in accordance with agreed programme and is carried out at a time which will not impact the business operation. Ensure that the Asset database is complete and up to date at all times following any planned works.

Any reactive emergency issues during the 12 months are to be reviewed and resolved within the following time frames:-

Asset Category	Definition	Reactive Repair Response time	Replacement Equipment Quotation to Whitbread Minor Works Manager
Priority 1	Outlet cannot trade effectively without asset There will be loss of sales and / or risk to Health & Safety	4 hrs.	24 hours
Priority 2	Operation seriously degraded without asset Potentially loss of sales, but no risk to Health & Safety if appropriate procedures followed	Same Day (before 18:00 for calls placed before noon)	24 hours
Priority 3	Minor impact on operation No loss of sales anticipated and no risk to Health & Safety if appropriate procedures followed	Response time to be agreed at time of placing call – 24hrs to max 72 hrs.	24 hours

All reactive emergency problems are to be fixed within a maximum of 5 days from date reported subject to parts availability. If this will not be achieved notification must be made to the Contract Administrator before the expiry of the 5-day.

Emergency Contact Support
Provide a list of contact phone numbers for key contract/supplier out of hour's staff for emergency support. This is to ensure that the hotel staff has direct access to key personnel for emergency support post contract works.

1.3 Developers Responsibility for the Provision of Energy Performance Certificates (EPC's) and BREEAM Rating

In accordance with the requirements of the DCLG Document 'A Guide to Energy Performance Certificates for the Construction, Sale and Let of Non-Dwellings – 2nd Edition July 2008' the Developer shall be responsible for the provision of an EPC for the whole building (whether the development be a shell or hotel turnkey with shell restaurant). In addition to this, a recommendations report is to be provided detailing any additional cost-effective measures that could be implemented over and above the current scope of works to improve the building's energy efficiency rating

The Developer shall provide a single Energy Performance Certificate for the whole of the Whitbread demise (hotel and restaurant) which also applies if the hotel and restaurant forms part of a larger multi use/occupied development. Prior to practical completion whilst progressing the EPC calculations the Developer shall request the proposed restaurant shell fit out drawings and specifications of all plant and equipment from the fit out design team or contractors so they can apply the proposed plant and equipment information and specifications within their calculations.

If the restaurant fit out information is not available at Practical Completion, then the Developer shall produce a **provisional** EPC based on the 'worst' energy rating allowed under Part L (which would assume the most energy intensive fixed services). Once the information for the restaurant is available, a final EPC shall be produced by the Developer and issued to Whitbread. The Developer shall provide the original and 3No copies of the EPC to Whitbread at Hand Over

Premier Inn hotels require a minimum BREEAM rating of Very Good. The Developer shall be responsible for employing an Accredited BREEAM Assessor to ensure that the building

achieves this rating. The developer must seek agreement from Premier Inn before assuming any credits requiring tenant action and/or information. At Practical Completion of the Hotel the Developer shall provide all relevant documentation demonstrating compliance with this Premier Inn requirement

Site Waste Management Plan Regulations 2008. A SWMP in implemented to discharge responsibility under the aforementioned regulations. The developments Principal Contractor to use the SMARTWASTE system run by the Building Research Establishment Trust (BRE Trust) to comply with the Regulations

1.5 Lightning Protection

The developer shall carry out the required calculations to determine if the development requires lightning protection in accordance with the guidance set out in BS/EN 62305. All calculations and risk assessments shall be forwarded to Whitbread prior to construction confirming the requirement or non-requirement of lightning protection.

If there is a requirement for lightning protection the developer shall supply, install, fix and commission the complete buildings lightning protection system.

1.6 Whitbread Carbon Reduction Target

The developer shall ensure that the proposed development is in line with Whitbread's Carbon reduction Target. To achieve this, the developer shall adopt an on-site carbon reduction strategy to provide a 35% reduction in CO2 emissions when compared to the Notional target of Building Regulations Part L England & Wales 2013 (sBem/DSM BER 35%< TER) or to achieve compliance with local planning criteria whichever is greater. The 35% reduction target shall be achieved through carbon savings from a range of areas within the building, because of this the carbon reduction strategy will be based on a fabric first approach following the "be Lean, be Clean and be Green" methodology.

Be Lean – Use of high insulation levels to the building fabric, high efficiency glazing and a reduced air permeability rating shall be considered first in line with the Whitbread standard Model specification.

Be Clean – Utilisation of energy efficient plant and equipment such as LED lighting, high efficiency heating and cooling, heat recovery ventilation and efficient fan motors.

Be Green – Use of some form of "Low or Zero Carbon" (LZC) technology

To accomplish the above target, the developer shall allow to provide a hot water pre-heat system served by one of the below listed LZC technologies to provide a minimum pre-heat temperature of 40ºc for a minimum of 60% of the total hot water demand of the proposed building :-

1. Air Source Heat Pumps - As manufactured by Mitsubishi Electric, selected from their CAHV heat pump boiler range complete with Buffer storage.
2. Combined Heat and Power - As Manufactured by Baxi-Senertec complete with Buffer storage.
3. Solar thermal - As manufactured by Andrews Water Heaters range of SOLAR-flo products complete with Buffer storage.

Additional carbon reduction may be required to achieve the 35% reduction target and this may be made up from a Photovoltaic Cell array.

4. PV panels should be installed in areas of minimal shade and generally in a due south direction, angled ideally around 65 degrees. PV panels shall have a minimum output of 300 W/m2.

Metering for all Photovoltaic arrays must be provided by Anesco, and all FIT applications should be managed in conjunction with Anesco.

The developers M&E Consultant team will be required to issue a written submission to the Premier Inn M&E Consultant 3 months prior to start on site to demonstrate a strategy for achieving the above reduction and then a final submission 6-9 months prior to PC to factually prove the installed system as designed delivers the % reduction as described. The developers M&E Consultant should put in place any measuring devices to enable them to gather data as required, this data should be made available to all parties via a Web Based Tool.

The developer will be required to undertake assessment of the installed renewable technologies 12 months' post completion. The developer will provide an end of defects performance check of each renewable technology systems installed. This will take the form of a report detailing the performance in accordance with Main Procedure Option C: System Assessment as outlined within CIBSE TM22:2006. The developers M&E consultant will put in place measuring devices necessary to enable them to gather data as required. This report will be produced over and above any other similar assessment required by any regulatory body.

To meet these requirements the developer shall notify Whitbread prior to the instigation of any technologies listed above with details of the proposal and required maintenance regime for the chosen technologies for the site

1.7 Building User Guide/ Log Book and Defects Process

Provide two independent building user guides for the development; one relevant for non-technical building users (guest) and the other appropriate for the facility/maintenance manager that will occupy the building. The building user guide is to be a separate document to the Building log book.

The guide must contain the information described below:-

- Building Services Information
- Emergency Information
- Energy & Environmental Strategy
- Water Use
- Transport Facilities
- Materials & Waste Policy
- Re-fit/Re-arrangement Considerations
- Reporting Provision
- Training - the developer is to ensure that post completion training is agreed after commissioning and carried out with the hotel management team. Premier Inn will provide a list of training requirements.
- Links & References
- General

The File needs to provide at least in electronic format for uploading to a database properly referenced such that the uploader can readily find the right information. (Not just a drawing number but a title for example)

For the snagging process Snagmanger is to be used www.snagmanager.com to ensure that all defects are corrected.

1.8 Existing Building Structure or Fabric or Services

Where any part of the development comprises retention of existing elements of building structure, fabric or services, the Developer shall deliver to the Tenant those retained elements in good repair at practical completion, having regard to the Tenant's interest in the property.

As soon as practicable the Developer and the Tenant shall agree a schedule of repair works to be undertaken by the Developer who shall publish a schedule thereof to the Tenant.

Having undertaken the agreed scope of repair works previously defined, the Developer

shall offer those works for inspection prior to practical completion to the Tenant who shall have the right to make reasonable representations prior to practical completion taking place.

The default position is that, unless an element of structure or fabric or services is expressly noted as being retained under the provisions of this specification, Premier Inn will be entitled to deem it as new.

1.9 Address and Postcode on Receipt of Planning

It is the responsibility of the developer to confirm in writing the address and postcode on receipt of planning

1.10 Passive Fire Protection

All fire stopping will be carried out by a specialist contractor employed by the Main Contractor.

The Contractor is to ensure that :-

- All fire stopping is to be installed by a FIRAS Accredited Installer.
- All fire stopping products must be Hilti fire stopping and protection systems.
- The project is to be logged on the FIRAS Online Database.

A 'Certificate of Conformity (Compliance)' for the completed works is to be obtained, (via the FIRAS Online Database), and be provided as part of the Handover information from the Main Contractor to Whitbread

1.11 Construction of External Walls

The building's external envelope including all insulation, cladding, fixings and ancillary materials, will be required to equal or outperform a Euroclass combustibility rating of A2-s3, d2 as defined in BS EN 13501-1:2007 + A1:2009 or an equal level of non or limited combustibility demonstrated by the manufacturer.

The exterior surface's spread of flame rating must equal or outperform Class O (national class) or B-s3, d2 (European class).

The above requirements will apply as the minimum acceptable standard to the whole of the building's envelope irrespective of the building's height or its position in relation to boundaries, and irrespective of any less onerous criteria stated in the Building Regulations Approved Documents.

Insofar as the Building Regulations requires a higher standard than the above requirements, the higher standard shall be met.

Furthermore, there will be a requirement to include a vertical cavity barrier at each and every bedroom wall position and floor level, as well as satisfying the standard requirements of cavity barrier spacing, design and construction in concealed spaces provisions/spacing as stated in the relevant parts of the Building Regulations Approved Documents.

Proof of compliance is required on all developments at technical detail development stage. No construction work is to commence prior to acknowledgement of acceptance from Whitbread.

Information required to demonstrate compliance is to include a minimum of:

- Fire strategy plans at all levels showing; compartmentation, fire ratings of all doors and walls, reference to fire stopping, fire rated windows, means of escape compliance, access for fire fighting personnel and structural fire protection measures
- Proposed wall build ups for internal partitions and external walls drawn at a minimum scale of 1:10 with materials and thicknesses defined sufficiently to ascertain compliance with the above limitations on combustibility and spread of flame

- Certification of all products used for cladding and cavity insulation to demonstrate compliance with the above limitations on combustibility and spread of flame for the specific project application and details.

At completion, proof of the materials used in the construction of the building and an as built version of the documents listed above are required to be included in the O&M manuals

1.12 Sprinklers (Where Required)

Where sprinklers are required to be installed (Note – This is NOT a Whitbread requirement) then the developer shall carry out a detailed building study and ascertain all design limitations and installation restrictions. Allow to develop a sprinkler design solution in full compliance with BSEN 12845 Incorporating LPC Technical Bulletins to achieve the required risk mitigation, to a minimum hazard rating of OH1 (Ordinary Hazard 1).

Provide full design and installation Drawings of the scheme and obtain approval from Whitbread of the design and the subsequent installation

Provide :-

- A fire and life safety risk assessment
- A clear statement of coverage and any allowable exceptions
- A main schematic drawing showing the entire installation on one sheet
- Floor layout plans for each floor level to illustrate the specific routing of pipework
- Specific details or exploded views as required to highlight key areas
- Builders works schedules and details

Ensure all fire safety systems meet the requirements of the Local Building Control Surveyor, the Fire officer, LPC and the Operator's Insurance Company, as applicable.

Provide a water storage tank to meet the storage requirements of the sprinkler calculations. The tank is to be in full accordance with current Water Supply Regulations, complete with :-

- Access facilities including internal ladder
- Float valves
- Screened overflow
- Screened weirs
- Screened warning pipes
- Connections
- Insulation
- Sections suitable for plant room installation
- High and low water level alarms
- Warning pipe and overflow discharge are fully visible and noticeable to maintenance staff
- Provide dedicated diesel or electrically driven sprinkler pump sets comprising:
- 3-phase jockey pump complete with all necessary valving and control interfaces
- For diesel systems, a double-skinned fuel tank in an accessible position within the plant room (ensure due consideration is given to fuel handling implications)

In all bedrooms and front of house areas (restaurant, reception, bar, toilets, etc) provide concealed or semi-concealed sprinkler heads, from the Reliable range of model XL Quick Response Commercial Sprinkler heads. Alternative manufacturers can be used but samples must be provided and signed off by Whitbread prior to installation. Heads in back of house areas can be of the exposed pendent type. Sprinkler heads shall be fast response sprinkler heads for life safety system. Sprinkler heads shall be stamped for compliance with LPC standards.

SECTION TWO – DETAILED REQUIREMENTS

2.1 Maintenance and Design life

2.1.1 The developer is to ensure that the building is designed to minimise future maintenance requirements

2.1.2 The minimum design life of the building is to be as follows:

Structure	60 years
Roof coverings	25 years
Windows and curtain walling	25 years
Drainage	25 years
Car park surfaces	15 years

2.1.3 The developer is to provide copies of supporting documentation, correspondence and literature and all warranties, certificates and guarantees demonstrating compliance with the minimum design life periods stated above.

2.1.4 All timber frames will comply with TFFRA Guidelines.

2.2 Roof

2.2.1 The developer is to design and construct roofs complying with the following :-

2.2.2 Roof coverings are to have a design life of 25 years and require no planned maintenance for a minimum period of 10 years

2.2.3 The developer is to provide safe access to any flat roof areas and external plant areas for the purposes of maintenance and repair by edge protection where necessary. Fall arrest systems are to be are not permitted.

2.2.4 Rainwater down pipes is to be external to the building wherever possible. Where internal down pipes have to be used the developer is to agree the routing of down pipes with hub by Premier Inn.

2.2.5 The developer is to form all openings and install flashings as may be required for kitchen extraction and ventilation equipment and any other equipment which forms part of the hub by Premier Inn works.

2.2.6 Any mechanical plant sited on the roof, must not be positioned directly over bedrooms. The fixing of any plant is to be agreed with the Acoustic Consultant.

2.2.7 U Values to be compliant with section 2.3.4

2.2.8 It is required that a extended staircase (not a ladder) be installed as the primary roof access route for maintenance, which is capable of being secured to ensure no public access.

2.3 External walls

2.3.1 External facing materials are to be durable and requiring minimal maintenance.

2.3.2 The developer is to form all openings as may be required for kitchen extraction and ventilation equipment and any other equipment which forms part of the Premier Inn works.

2.3.3 The developer is to install ventilation grills to match the external finishes.

2.3.4 U Values:

- External walls - 0.15 W/m^2K
- Ground Floor - 0.15 W/m^2K
- Roof - 0.1 W/m^2K
- All Windows - 0.9 W/m^2K

2.4 Windows

The developer is to install all windows, screens and curtain walling as detailed on the lease drawings.

2.4.1 Bedroom windows

- Minimum size as set out on Whisdom
- If windows cannot be cleaned from external access a fully reversible opening action to permit safe cleaning of both faces of the glass from inside the building ironmongery to be lockable and tamper proof with no permanent handle. Opening restrictor to limit the maximum clear opening at any point to 100mm will be required that is robust, lockable and tamper proof. It must not be possible to override the restrictor without the aid of a key.
- All opening windows are to have a 4 point locking system.
- All opening windows not to clash with curtain pelmets on opening.
- Frames to be aluminium or PVC requiring minimal maintenance.
- Glazed with low emissivity glass to 0.9 U Value with solar control.
- There is to be a glazing replacement strategy agreed with Premier Inn that does not require scaffolding.
- Frame must allow internal access only for cleaning windows via a fully reversible central counterweight pivot, designed for glazing weights of up to 67kgs m^2.
- The window must be tamper proof with a removable maintenance handle only available to housekeeping and only accessible for cleaning purposes from inside the building.
- The tilt and turn mechanism will be further restricted to 100mm and only fully operable with the maintenance key release. The maximum clear opening section will only ever be 50% of the height of the actual window at any one point during opening.

2.4.2 Reception, Bar & Restaurant windows

- Aluminium framed screens with a polyester powder coat finish
- Glazed with double glazed units with low emissivity and toughened glass

2.5 Main Entrance Doors

2.5.1 The developer is to install 2 sets of automatic sliding entrance doors and side screens to form the customer entrance lobby.

2.5.2 Doors and screens are to be aluminium framed with a polyester powder coat finish.

2.5.3 Glazing is to be toughened to comply with building regulations requirements for safe breakage.

2.5.4 Door control switches are to be routed to the Meet and Greet Station.

2.5.5 The inner set of the doors is to be linked to an external key card reader and have an intercom fitted back to reception and linked to the pager.

2.5.6 Operational Details

External Door

- In 2 way - doors open on PIR both ways

- In 1 way mode - door locks and bolt activated
  - door opens on PIR exit
  - door opens on guest card - entry.

- In Lock mode – door closes and locks - bolt activated
  - door opens on guest card - entry

Doors can be opened from intercom handset at all times on pressing intercom externally and button being pushed on the handset at reception. These will all deactivate in a fire alarm.

The failsafe close switch has been installed incorrectly (the switch currently opens the locked door only) but is intended to enable staff to close and lock the doors in an emergency with the flick of a switch at any time deactivating the guest swipe access.

Internal door

- In 2 way - door opens on PIR both ways
- In 1 way (exit only) - door opens on PIR exit
  - door opens on guest card - entry

- In Lock mode – door closes but can be prised open
  - door opens on guest card - entry

Where the main entrance doors be they Bi Parting / Sliding / Opening Inwards / Outwards type doors are on a FE route then the following shall be installed

- Green Break Glass Override to open the doors in the event of sensor failure
- Fire Alarm Interface (Open / Release Doors in the event of an alarm)

The green break glass will be located on both the inner and outer door and will open the doors in the event of a sensor failure or other fault that prevents the doors from opening automatically; this is based on the understanding that power is available to the doors or that the action of the break glass is to cause power failure and the doors then fail safe open or can be manually opened

There is no requirement for a Power Supply Backup, if, in the event of power failure, the doors fail safe open or can be manually opened.

Where the main entrance doors be they Bi Parting / Sliding / Opening Inwards / Outwards type doors are not on a FE route (i.e. don't form a designated fire exit from the reception/F&B area), then there is no need for any break glass override to the doors

2.6 External doors

2.6.1 The developer is to install all external doors and door sets. Doors and door sets are to be steel or aluminium with polyester powder coat finish and are to include all glazed panels, ironmongery. There will be level thresholds for all delivery doors and refuse points of exit.

2.7 Floors

2.7.1 The developer is to provide structural floors to a tolerance on levels in accordance with the National Building Specification (NBS) and finish suitable to receive floor finishes.

2.7.2 Where the soil test survey indicates the presence of methane or other gases, the developer is to incorporate a gas membrane within the ground floor construction.

2.7.3 All floors are to achieve both airborne and impact sound reduction in accordance with building regulations and the hub by Premier Inn's acoustic requirements as listed within this document

2.7.4 The floors are to be designed to carry the following loadings:

Specific floor use	Uniformly distributed load kN/m2	Concentrated Load kN
Plant room, lift motor rooms	**7.5**	**4.5**
Bedrooms	**2.0**	**1.8**
Bedroom corridors / stairs / hallways / reception	**4.0**	**4.5**

Linen rooms / store	**3.0**	**4.50**
Roof	**Subject to roof type and build up (flat / pitched)**	**Subject to roof type and build up (flat / pitched)**

The developer is to form all holes through floors as may be required for kitchen extraction and ventilation equipment and any other equipment which forms part of the Premier Inn works.

2.8 Internal Walls and Doors

2.8.1 All internal walls are to achieve airborne sound reduction in accordance with building regulations and the hub by Premier Inn acoustic requirements as listed within this document.

2.8.2 The developer is to form all openings through internal walls as may be required for kitchen extraction and ventilation equipment and any other equipment which forms part of the Premier Inn works.

2.8.3 All kitchen walls are to be have a full plywood lining behind any plasterboard.

2.8.4 All internal doors to be as set out in Whisdom.

2.8.5 Pre-hung door sets are to be used on all bedroom and bathroom doors and details are available on Whisdom .

2.9 Staircases

2.9.1 The developer is to provide all staircase flights, to agreed levels, tolerance's and finish, suitable to take floor coverings and finishes directly. Any retained stairs, in existing buildings being converted will have works completed as required to achieve the latest building regulation requirement and not be treated as exempt under retained structure status. Also ensure that any retained balustrade / handrail is modified as needed to achieve the minimum of 1100mm height as per Whitbread standards All new handrails, balustrades etc. will be as per the Whisdom design details, or as agreed in writing with Whitbread. Any retained stairs to have new balustrades & handrails.

2.9.2 Escape stairs are to be sited and to be of adequate width so as to provide simultaneous means of escape in accordance with the requirements of the current building regulations for a hotel with a population capacity based on 2 persons per standard / larger bedroom, 2 persons per wheelchair accessible bedroom and 1 person per 1.0m2 of bar/restaurant area.

2.10 Lifts

2.10.1 Generally

2.10.1.1 The full lift performance specification is provided by hub by Premier Inn and located on Whisdom and a full Vertical Traffic Assessment must be carried out to confirm the number, size and speeds of the lifts to comply with the waiting times set out in the specification.

2.10.1.2 Design life for all lift installations shall be 20 years minimum.

2.10.1.3 Guest passenger and goods/passenger lifts shall be closed loop VVVF gearless electric traction type compliant with The Lift Regulations, BS EN 81-20 and BS EN 81-50, BS EN 81-28, BS EN 81-53, BS EN 81-73, BS ISO 4190-1, and BS 7255. Testing procedures shall conform to BS 8486-1.

2.10.1.4 Where a fire-fighting lift is required then the requirements of BS 9999 and BS EN 81-72 shall be observed in respect of the lift equipment, all related services and construction of the lift well.

2.10.1.5 Where an evacuation lift is required then the requirements of BS 9999 and the relevant sections of BS EN 81-72 shall be observed in respect of the lift equipment, all related services and construction of the lift well.

2.10.1.6 The scheme developer shall clearly define to Premier Inn which energy efficient features have been included within the lift systems selected to ensure that due consideration is given to environmental matters.

2.10.1.7 The emergency alarm device as per 14.2.3 of BS EN 81-1 shall be the Memcom model manufactured by Avire.

2.10.1.8 Diagnostic tools for the fault display, interrogation and parameter setting of any electronic system elements shall be provided with the equipment on a per lift basis. All access codes/passwords shall be provided and the equipment shall not be limited by time in operation or number of journeys.

2.10.1.9 Fire/smoke curtains must be fitted as required in cases of a lift prejudicing escape routes, such as where the lift serves a protected bedroom corridor and a BOH room such as a linen room.

2.10.2 Guest Passenger Lifts

2.10.2.1 Guest passenger lifts shall always be provided on all building of three storeys and above.

2.10.2.2 Lift groups shall be sized and speeded to provide an absolute maximum interval of 45 seconds with a handling capacity of 8.5% in each direction over a five minute period; during which time no lift shall load to more than a predicted 40% of rated capacity, BS 5655-6 shall be observed. 100% hotel occupancy shall be assumed with an average of 1.8 persons occupying each room. The entrance width shall be selected to suit the lift capacity determined but shall be a minimum of 900 mm.

Weekday Operation	All Room Types	1.2 persons
Weekend Operation	HUB Standard Double Room	1.4 persons
	HUB Larger Double Room	1.8 persons
	HUB Accessible Room	1.4 persons

2.10.2.3 Lifts shall satisfy the hourly rated starts determined during traffic calculations.

2.10.2.4 In addition to clause 2.10.1.3 guest passenger lifts shall also meet BS EN 81-70 (Type 2), BS 8300 and Approved Document M of the Building Regulations.

2.10.2.5 Control systems shall be full collective operated by a quality competent despatching system which shall also allow landing call bypassing for laden cars. In duplex and triplex systems and for efficiency only the first idle lift shall return the main floor, subsequent idle lifts shall park at the last level served. For systems with more than three lifts a separate despatch controller shall be provided which shall be self-learning to optimise lift performance, the parking logic shall be fully adaptive.

2.10.2.6 The number of landing station risers shall be determined to suit the arrangement of the lifts, where there is more than one lift the quantity of risers shall typically be one less than the quantity of lifts. Landing indicators shall feature next travel direction arrows at all levels, the main landing shall also provide lift position.

2.10.2.7 Lift cars are to be fitted with electronic card reader systems linked into the lift operating system. The access control / card system is as specified elsewhere within this document.

2.10.2.8 Where guest passenger lifts also serve back of house areas then access to these levels/openings shall be secured via key-switch to prevent public access into these areas.

2.10.2.9 Car and landing entrance equipment shall be heavy duty type driven by electronically controlled VVF means.

2.10.2.10 Emergency car lighting shall be integrated with the normal lighting and shall provide a minimum 10% of the normal lighting level at the floor for a period of not less than 3 hours

of continuous running.

2.10.2.11 Lift car finishes shall be as follows:

Note: The side wall containing the car control station shall be selected in accordance with BS EN 81-70, in the case of an open-through lift the side selected shall be on the basis of the majority of guest-side entrances.

Single Car Entry

• Side wall (with COP)	Plastic Laminate – Beige Sahara *
• Side wall (without COP)	Lower - Plastic Laminate – Wood Sinitra * Upper – Back-painted Glass – RAL 1019 2 Glass panels to be provided horizontally positioned and butt jointed along the centre line of the upper car wall panel
• Rear wall	Plastic Laminate – Wood Sinitra *
• Entrance surround	Stainless steel – Brushed
• Car doors	Stainless steel – Brushed - Centre opening
• Ceiling	Stainless steel – Brushed (LED Spots)
• Car station panel (COP)	Stainless steel – Brushed
• Handrail	Stainless steel – Brushed Side wall (without COP) and rear wall
• Lower skirting trim	Stainless steel – Brushed - Three sides
• Mirror	Clear glass - Upper half rear wall Hidden TV screen 42” portrait orientation
• Floor finish	Recess for change order PI AA_March 17-310 for ID4.1 and 4.2 Amtico flooring

Dual Car Entry (Through Opening)

• Side wall (with COP)	Plastic Laminate – Beige Sahara *
• Side wall (without COP)	Lower - Plastic Laminate – Wood Sinitra * Upper – See mirror
• Entrance surrounds	Stainless steel – Brushed
• Car doors	Stainless steel – Brushed - Centre opening
• Ceiling	Stainless steel – Brushed (LED Spots)
• Car station panel (COP)	Stainless steel – Brushed 10.4” TFT H.Res Programmable Display
• Handrail	Stainless steel – Brushed Side wall (without COP)
• Lower skirting trim	Stainless steel – Brushed – Two sides]
• Mirror	Clear glass with etched HUB logo Upper half side wall (without COP) Where shaft dimensions allow a TV screen arrangement is to be provided into the side wall of the lift car
• Floor finish	25mm Recessed tray for specified flooring Ceramic Flooring *
• Approved Ceramic Flooring	Swedecor Treverk Ever Ash 1200 x 200 slip rating R10

2.10.2.12 Landing finishes shall be as follows:

• Landing Frame	-	Patterned stainless steel – to match car side walls
• Landing Door Panels	-	Patterned stainless steel – to match car side walls
• Landing Push Stations	-	Stainless steel – Brushed
• Landing indicator	-	Stainless steel – Brushed

2.10.2.13 The selected patterned stainless steel shall be common for both the lift car and the landing finishes.

2.10.2.14 Additional features
The following additional features shall be provided:-

- Car preference key-switch located in car control panel
- Auto dialler induction loop
- Ground pushbutton and floor indicator to read G

2.10.3 Goods/Passenger Lifts

2.10.3.1 The requirement for one or more goods/passenger lifts will be determined by Premier Inn following consideration of points for delivery, hotel height / storeys and food, beverage and principal linen storage locations.

2.10.3.2 Lifts shall have a minimum capacity of 16 persons / 1,250Kg and plan dimensions of 1,400mm wide x 2,000mm deep, the minimum car height shall be 2,300mm. Entrances shall be 1,400mm wide x 2,100mm high. The purpose of this size is to accommodate a pallet, pallet truck and operative

2.10.3.3 Rated speed shall be appropriate to travel height, BS 5655-6 shall be observed.

2.10.3.4 The equipment shall be rated for minimum 120 hourly starts.

2.10.3.5 Control systems shall be full collective for all applications above two storeys.

2.10.3.6 Landing indicators shall feature lift position and next travel direction arrows at all levels.

2.10.3.7 Lift cars are to be fitted with electronic card reader systems linked into the lift operating system. The access control / card system is as specified elsewhere within this document.

2.10.3.8 Car and landing entrance equipment shall be heavy duty type driven by electronically controlled VVVF means.

2.10.3.9 Emergency car lighting shall be integrated with the normal lighting and shall provide a minimum 10% of the normal lighting level at the floor for a period of not less than 3 hours of continuous running

2.10.3.10 Lift car finishes shall be as follows:

- Side/rear walls - Patterned stainless steel – Linen
- Entrance surround - Patterned stainless steel – Linen
- Car doors - Patterned stainless steel – Linen
- Ceiling - White with flush fitting anti-vandal light (100Lux)
- Car station panel - Stainless steel – Brushed
- Bumper Rails - Heavy duty rubber - Two pitches - Three sides
- Lower skirting trim - Patterned stainless steel – Linen
- Floor finishes - Stainless Steel Chequer-plate / Durbar

2.10.3.11 Landing finishes shall be as follows:

- Landing Frame - Patterned stainless steel – Linen
- Landing Door Panels - Patterned stainless steel – Linen
- Landing Push Stations - Stainless steel – Brushed
- Landing indicator - Stainless steel – Brushed

2.10.3.12 Construction of the lift car, car doors, and landing entrances shall be substantial and robust; this shall include the car and landing door thresholds which shall be heavy duty, e.g. stainless/bronze.

2.10.3.13 Robust measures shall be provided to avoid impacting between the landing entrances and palletised loads for all levels requiring pallet access. All other levels shall have a level of protection suitable for the use by linen trolleys.

2.10.4 Disability Access Equipment

2.10.4.1 Disabled access lifts are to be provided where required for compliance with the Equality Act and selected in accordance with criteria given in Approved Document M of the Building Regulations, the arrangement and proposed supplier are to be agreed with Premier Inn.

2.10.4.2 Equipment shall comply with BS EN 81-40, BS EN 81-41, BS 6440, ISO 9386-1, and ISO 9386-2 as appropriate.

2.10.4.3 Voice communications shall be provided to link the point of arrival to a location inside the hotel agreed with Premier Inn.

2.10.4.4 Whitbread to have approval for the style of the lift if located at the front entrance to ensure it does not detract the aspect

2.10.5 Inaccessible Service Lifts (Dumbwaiters)

2.10.5.1 Power operated inaccessible service lifts (dumbwaiters) are to be provided where required, in which case a minimum of two lifts shall be provided

2.10.5.2 Equipment shall comply with BS EN 81-3 and all other applicable requirements.

2.10.5.3 The minimum rated capacity shall be 100Kg.

2.10.5.4 The carriage of each lift shall be fitted with a heating element which shall be manually switched from the kitchen area outside the lift well; visual indication shall be provided at the switch to indicate when the heating element is switched on.

2.10.5.5 The minimum cabin size shall be 800mm W x 800mm D x 1200mm H and shall incorporate the following features:

- Mid-height shelf
- Electrically checked car roller / rise and fall shutter
- Rise and fall landing entrances
- Call and send controls at each entrance
- Lift position, occupied, visual and audible arrival indications
- Intercom between all served levels
- Switchable heating elements

2.10.5.6 Cabin and landing finishes are all to be stainless steel – brushed.

2.10.6 Evacuation Intercom System as an addition to existing or proposed Firefighting lifts

2.10.6.1 The evacuation intercom system is to be in accordance with BS5588 Part 8, BS9999:2008 3.70.2, BS9999:2008 46.9 including annex G.

2.10.6.2 In its simplest form, it is a system that is used for the evacuation of people with impaired mobility in the event of a fire or emergency, under the direction of management, authorised persons or fire fighters.

2.10.6.3 The system should comprise of a final exit storey control panel (FES control panel), evacuation control stations situated on each landing and a lift car station.

2.10.6.4 It is powered by a mains control unit (containing a power supply), which is normally situated in the lift motor room, above the ceiling line or other accessible location

2.10.6.5 Once activated by the Euro key switch on the FES control panel, the lift controller automatically switches to evacuation mode, sending the lift car directly to the FES level.

2.10.6.6 An interactive two way communication link is established between the FES control panel and the lift car and also the FES control panel and the evacuation landing stations.

2.10.6.7 At all levels, the evacuation landing stations start to flash, as does the lift car station. The lift can now answer normally to car calls for the assisted evacuation of people with impaired mobility.

2.10.6.8 The evacuation mode is normally stopped upon the fire fighter's arrival when the lift is switched to fire fighter's mode.

2.10.6.9 Recommended Evacuation Intercom Systems;

- Windcrest Evacuation Intercom to BS9999
- Flush Mounted

Note: Always default to flush type and vary if required, such as in the instances of building refurbishments

2.10.6.10 The provision of the Windcrest Evacuation intercom may require the lift auto dial emergency telephone system being changed from the Whitbread standard Memcom unit to the AD10003R Windcrest auto dial unit for overall compatibility, this is acceptable only on the Evacuation Lift, and all other lifts in the group should be provided with Memcom auto dial systems.

2.10.7 Suppliers – To be agreed with Whitbread

2.10.7.1 The Premier Inn's lift suppliers are indicated below:

Morris Vermaport Ltd
MV House
14 Vickery Way
Chetwynd Business Park
Chilwell, Beeston
Nottingham NG9 6RY

Contact: Mr Andy Waddell

Tel: 0115 973 7500
Fax: 0115 973 7501
Mobile: 07740 822661
andyw@morrisvermaport.co.uk

Orona Ltd.
Suite 6
Ellismuir House
Ellismuir Way
Tannochside Park
Uddington
G71 5PW

Contact: Mr Stephen McMahon

Tel: 01698 803901
Fax: 01698 803902
Mob: 07799 114265

stephen.mcmahon@orona.co.uk

Kone
Global House
Station Place
Chertsey
KT16 9HW

Contact: Mr Rob Henderson

Tel: 07771 765266
Rob.Henderson@Kone.com

2.10.7.2 The Whitbread appointed Lift Consultants are:

VerticA
2A Maple Court
Ash Lane,
Collingtree
Northampton
NN4 0NB

Contact: Mr Danny Hillyard

Mobile: 07791 478262
danny@vertica-consulting.co.uk

2.11 Linen Chute (where required)

Not applicable

2.12 Electronic Door locks

2.12.1 Premier Inn is to specify electronic keycard locking system to be supplied and installed by the contractor to the following doors :-

- Bedrooms
- Linen/cleaners rooms
- Store rooms
- Staff room
- Ground floor reception to main stair(s) door
- Lift Lobby To Bedroom Corridors
- Reception to ground floor corridor
- Offices
- Comms room
- Plant rooms
- Lift motor room
- Staff external entrance door
- Linen external door
- Kitchen external door
- Kitchen internal door
- Dry store
- Bar
- Luggage store
- Plant room(s) external door
- Bin Store
- Lifts as noted above
- All other guest facing doors
- Other locations may be required for operational reasons resulting from non-model hotel layouts and these to be agreed with Premier Inn

2.12.2 Lift controllers are to be provided to the lift manufacturers for fitting to all lift cars providing card access only to all floors where required.

2.12.3 A remote access controller is to be provided internally and externally on all guest entrance doors in conjunction with an intercom, and linked to the electronic sliding door control system. There is to be an intercom between the service entrance and reception

2.12.4 The developer is to provide all control and key preparation equipment (including 1 key cutter per work station, 1 per meet & greet) in accordance with the standard Premier Inn agreement with the key system supplier.

2.12.5 The lock supplier is :-
Kaba
Noel Collier
Tel: 0870 609 0269 / 01884 259 592
Lower Moor Way
Tiverton
Devon
EX16 6SS

ncollier@kaba.co.uk
www.kaba.co.uk

2.13 Acoustic performance

2.13.1 Airborne Sound Insulation

Airborne sound insulation between spaces shall not be less than the values scheduled in Table 2.13.1 when measured in accordance with BS EN ISO 16283-1 and rated in accordance with BS EN ISO 717-1.

Table 2.13.1 - Airborne sound insulation standards

Room Areas	Performance
Bedroom – Bedroom Bedroom – Bathroom (different rooms) Bathroom – Bathroom	Walls - $D_{nT,w + Ctr}$ 43 dB Floors - $D_{nT,w + Ctr}$ 45 dB
Bedroom – Restaurant/bar	$D_{nT,w}$ 60 dB
Bedroom - Kitchen	$D_{nT,w}$ 60 dB
Bedroom – Other tenancies	$D_{nT,w}$ 65 dB
Bedroom – Corridor/Stairwells	Walls - $D_{nT,w + Ctr}$ 43 dB
Bathroom – Corridor Bedroom – Office Bedroom - Linen Bedroom - Plantroom	$D_{nT,w}$ 45 dB $D_{nT,w + Ctr}$ 43 dB $D_{nT,w + Ctr}$ 43 dB $D_{nT,w}$ 60 dB

Internal wall constructions within bedrooms (but not to en-suite bathrooms) shall have a sound insulation performance of not less than Rw 40 dB.

Doors to bedrooms shall have a sound insulation performance of not less than Rw 29 dB when measured in accordance with BS EN ISO 10140-3 Parts 1, 2, 3, 4 & 5 and rated in accordance with BS EN ISO 717-1.

Interconnecting doors shall maintain the required room to room sound insulation performance of the total wall as identified above.

Bedrooms should not be located adjacent stairs or lifts but where this is unavoidable twin stud wall arrangements shall be used.

2.13.2 Impact Sound Insulation

Impact Sound Insulation between spaces shall not exceed the values scheduled in Table 2.13.2 when measured in accordance with BS EN ISO 140-7 and rated in accordance with BS EN ISO 717-2. Consideration shall also be given to the requirements of BS EN ISO 16283-2: 2014

Table 2.13.2 - Impact Sound Insulation Standards

Room Areas	Performance
Bedroom to Bedroom	$L'_{nT,w}$ 62 dB
Bathroom to Bedroom	$L'_{nT,w}$ 62 dB
Corridor to Bedroom	$L'_{nT,w}$ 62 dB
Bedroom to Restaurant / Reception / Kitchen / Back of house areas	$L'_{nT,w}$ 62 dB
Restaurant / Reception / Kitchen / Back of house areas to Bedroom	$L'_{nT,w}$ 25 dB

All separating floor systems including those in corridors shall be free from ‘squeaks’, ‘creaks’ and ‘booming’ from footfalls.

All door sets shall include seals on the sides head and threshold in order to meet the necessary acoustic requirements. Smooth door closure shall be achieved in order to minimise noise disturbance from occupant movement.

2.13.3 Reverberation in Common Parts

Sound absorption is to be provided in corridors, staircases and hallways in accordance with the requirements of the Building Regulations 2010, Approved Document E, and Section 7.

2.13.4 Background Noise Levels – External Sources

The noise level in any hotel bedroom with windows closed due to all external sources including road, rail and air traffic and noise from activities outside the hotel and any adjacent premises shall not exceed the average and maximum noise levels in Table 2.13.4

Table 2.13.4: Internal Background Noise Level Requirements

Period	Noise Level
Daytime (07:00 – 23:00 hrs)	L_{Aeq},1hour 35 dB
Night-time (23:00 – 07:00 hrs)	L_{Aeq},1hour 30 dB L_{AFmax} 42 dB (*)

(*) The maximum criterion applies to all vehicle and railway train passbys and all aircraft flyovers. It also applies to the noise from all street activities including those associated with patrons attending and leaving adjacent, neighbouring or connected entertainment venues; noise associated with commercial and industrial neighbouring premises including delivery activities and process equipment; seagulls and church bells. Genuinely infrequent and unpredictable sources of noise such as car alarms occurring no more than twice a night are excluded.

Music and patron noise intrusion from inside or outside any adjacent, neighbouring or connected gym, bar/restaurant or nightclub demises, into the guest bedrooms shall be controlled such that this source of noise intrusion is inaudible.

It is suggested that this can be achieved if the music/patron/gym noise predicted in the bedroom, as an Lmax (FAST) in each 1/3 octave frequency band, is at least 10dB below the prevailing background noise level in the bedroom, described as an L90 in each 1/3 octave frequency band.

Internal noise levels in bedrooms from underground railway train movements and re-radiated noise from railway trains not visible from the bedroom window when measured at the bedhead shall not exceed 30dBLAFmax.

2.13.5 Noise from any other building services plant

Noise from any other building services plant serving neighbouring, adjacent or connected demises shall not cause noise levels to exceed NR 20 Leq, 5min within any bedroom.

Vibration within guest bedrooms shall be imperceptible. Guidance on levels of vibration considered being imperceptible to seated standing and resting persons can be found in BS6472.

The noise criteria stated above shall be achieved with all facade ventilators, where installed, in their normally open position.

External facade constructions and components such as brise soleil, grilles, ventilators, curtain walling systems or other architectural features shall not give rise to audible whistling, creaking, rattling or other noises as a result of wind or other climatic effects.

2.13.6 Background Noise Levels – Internal Sources

The background noise level in any hotel bedroom as a result of comfort cooling room units serving the bedroom shall not exceed NR25 Leq when the systems are operating at their design duty. Comfort cooling systems serving bedrooms should also have the facility to be operated at quieter duties and be switched off by room occupants.

The background noise level in any hotel bedroom as a result of constant minimum fresh air ventilation systems serving the guestroom or other parts of the development shall be between NR15 and NR20 Leq when the systems are operating at their design duty.

The background noise level in any hotel bedroom as a result of any other building services systems serving the bedroom or any other parts of the development shall not exceed NR20 Leq within the bedroom.

Building services noise in other areas of the hotel shall not exceed the following levels:

- En-suite bathrooms NR45
- Corridors/lobbies/reception NR40
- Restaurants NR40
- Public Toilets NR40
- Staff Rooms NR40

Noise emission from hydraulic systems including domestic hot and cold water services, rainwater pipework, refrigerant pipework, and soil and waste pipes serving other guestrooms particularly, shall be inaudible in normal use.

Noise from the operation of lifts shall be inaudible in hotel bedrooms.

Noise emission from all plant associated with the hotel shall be designed so as to be at least 5dB below the lowest measured background noise level at night with all plant operating simultaneously at full duty, when measured at the nearest noise sensitive property.

The developer is to provide hub by Premier Inn with the following acoustic information in accordance with an agreed information release and approval schedule or as reasonably requested by Premier Inn:

An acoustic report which demonstrates that the level of external noise intrusion into the hotel will comply with the criteria set down elsewhere in this specification. It is expected that the report will include measured, statistical and frequency based noise level data for the site measured over a period of at least 24 hours using continuous 10 or 15 minute samples. It will consider all relevant sources of external noise and provide details of the sound insulation performance requirements of the various construction elements in order to achieve the specified criteria.

Acoustic reports shall be provided prior to Practical Completion which demonstrate compliance with the noise intrusion limits set down in the specification; compliance with the room to room sound insulation criteria set down in the specification; and compliance with the building services noise levels limits set down in the specification.

The sound insulation performance of the at least 10% of the guestroom walls and floors shall be measured and shall include at least 4 interconnecting doors where present. Floors between the bedrooms and restaurant/kitchen and other demises shall be measured where present.

The following measurement methodology for determining indoor ambient noise levels, or other such methodology as may be agreed with Premier Inn, shall be used:

Internal ambient noise levels shall be measured in at least 10% of the fully furnished bedrooms agreed with hub by Premier Inn. Measurements of external noise ingress from external sources including noise from underground trains shall be taken with building services switched off. Façade trickle ventilators, where provided for background ventilation, shall be opened for the duration of the measurements. Where different facade constructions may influence the internal noise levels then a sample of each facade type should be measured. Generally a 'worst-case' example is to be identified

for measurement in each case. Rooms to be selected for testing must be agreed with Premier Inn before testing is completed.

Measurements should be made at a position representative of the bedhead position nearest to the window.

Noise levels are to be measured over a full 8 hour night-time period an appropriate proportion of the 16 hour daytime period, to demonstrate that the average noise level limits have been achieved.

The LAFmax levels are to be determined by continuous measurement over the night-time period from 11pm to 7am. Over this time period 'short Leq' measurement samples should be recorded using a fast time constant with an individual sample duration of no greater than 1 minute. (thus resulting in at least 480 measurement samples for the night-time period) The maximum noise level in each sample can then be compared directly with the LAFmax criterion. A greater measurement resolution would be acceptable.

Measurements should generally be attended or alternatively audio recordings made of any exceedances of the 42dB LAFmax criterion, to enable subjective assessment of the cause of any exceedances.

Measurements of building services noise shall be undertaken with building services plant switched on and operating at its normal duty. Building services noise levels shall be measured in at least 10% of all bedrooms.

2.14 Drainage

2.14.1 The developer is to provide all surface and foul drainage, including all connections into the existing drainage infrastructure, provision of soakaways, pumping stations and treatment plants and is to obtain all approvals and make all payments in respect of these works.

2.14.2 The foul water drainage is to be designed to accommodate a peak flow in accordance with requirements of the Building Regulations

2.14.3 The specific details of any pumping stations and treatment plants, including alarms, back-up systems and maintenance requirements are to be agreed with hub by Premier Inn.

2.14.4 Internal inspections chambers should be avoided where possible.

2.14.5 A CCTV survey of the drainage is to be completed and handed to Premier Inn on completion of the project.

2.14.6 Above ground drainage pipes - rain & soil - to be insulated.

2.15 External Signage

2.16.1 The developer will be responsible for the provision of all site signage in accordance with the signage zones/scheme shown on the AFL drawings and to the extent of which hub by Premier Inn have obtained planning consent.

2.16.2 The Developer is to include the ensuring that suitable grounds for fixing of the external signs and floodlighting on the building are provided as part of the external wall and roof constructions and shall demonstrate the provision in the design development Developer to provide all necessary power cables; switching etc. is to be supplied and connected to sign locations.

2.16.3 Site and building design should accommodate signage location and zones as per attached guidance. See Appendix A Signage Suite.

2.16.4 Signage zones/Scheme are to be agreed with hub by Premier Inn on Lease elevation drawings.

2.16 Items supplied & installed by Premier Inn

2.17.1 The developer must allow for coordinating and for access and attendance for Premier Inn's tradesmen, together with welfare facilities and insurance of goods installed prior to Practical Completion. All programmes prepared shall identify all items noted as supplied and installed by Premier Inn prior to Practical Completion. Attendance shall include disposal of all packaging.

- Beds & mattresses, sofa beds, loose furniture
- Bottle coolers and other fixed bar equipment
- CCTV installations
- Intruder alarm system
- Computer systems and telephone equipment
- Restaurant Pictures and bric-a-brac, table lamps
- Curtains, curtain tracks, nets/blinds
- Catering equipment - Note – refrigeration and other fixed and loose catering equipment (including freezer and chiller installations) is supplied by other suppliers but it is the catering contractor's responsibility to coordinate and manage the installation of the other equipment and the developer will need to liaise only with the catering contractor in this respect.
- Firefighting equipment including Ansell system in kitchen
- Beer supply equipment
- Vending machines
- Music system
- Telephone installations
- Till installations
- Safes
- Washing machines, tumble dryers, glass washers
- Lockers
- Free standing linen room and store racking
- TV installations
- Podium check-in kiosks and reception furniture

2.17 Building Tolerances

Building tolerance in line with industry standards of +/- 2% and in compliance with the relevant clauses of the National Building Specification - Standard Version are acceptable. These dimensions are to be checked and confirmed by the Whitbread supervising consultants. Any introduction of columns or beams, not shown on the AFL drawings must be approved by hub by Premier Inn. Kitchens & reception areas must be kept free of structural columns or projections beyond the wall lines – unless presented and formally agreed in advance as a landlord variation – confirmed in writing.

Some areas need critical minimum dimensions and these to be set out on the Agreement for Lease drawings:

- Kitchen
- Reception
- Bar and Restaurant

2.18 External Car Parking and Landscaping

2.19.1 All Car parks are to be laid out generally in accordance with the British Standard Guidelines.

2.19.2

2.19.3 In particular 5.0 x 2.5m car parking spaces are preferred by Whitbread where site area allows. Any car parking bays should be 3m away from any bedroom windows.

2.19.4 All site specific, drawings and specification for any planting and hard landscape finishes to be submitted to hub by Premier Inn for approval and approval not unreasonably withheld. Planting should be of a suitable maturity for an open hotel. Bark mulch is to be avoided and blue slate chippings to be used for weed prevention. Planting should be designed to minimise maintenance and be durable for the location and level of exposure Premier Inn will be responsible for maintenance but any plants which become diseased or died during the first 12 months will be replaced by the developer.

2.19.5 Swept path plans to be produced to ensure the requirements for deliveries are met as set out in Appendix C of this document.

2.19.6 Allowances should be made for the vehicle access requirements of the Fire Service as well as those of deliveries and refuse collection vehicles.

2.19 Timber Frame Construction

2.20.01 The Developer's attention is drawn to the fire risks associated with timber frame design during the construction period. Whitbread have been at the forefront of addressing this issue with the Fire Authorities and the Health and Safety Executive. Additionally Whitbread and their CDM coordinator have assisted the UK Timber Frame Association with the preparation of guidance to assist designers and contractors. The Developer's responsibility is to:

- Appoint designers and contractors who are competent to undertake their duties under the Construction (Design and Management) Regulations 2007.
- Apply industry guidance to manage fire risk in timber frame design. (Guidance is available on Whitbread's Whisdom website and on the STA website "Design Guide to separating distances for buildings during construction".
- Appoint a competent CDM coordinator experienced in timber frame fire risk process.
- Employ a timber frame contractor that is a member of STA.
- Ensure that all timber within the build is responsibly and legally sourced and evidence to this effect is provided to Whitbread in accordance with the requirements of BREEAM.

2.20.02 Further guidance refer to STA Design Guide for Separating Distances on Timber Frame Construction Sites" is available on the STA website.

2.20.03 For advice on competency of designers and contractors refer to Appendix 4 and for competency of CDM coordinators refer to Appendix 5 of the Approved Code of Practice for the CDM Regulations 2007. ("Managing health and safety in construction" L144 ISBN 978-0-7176-6223-4). The developer is to appoint a competent Fire Engineer to advice on the suitability of timber frame construction, the specification and mitigation measures for the particular site.

2.20.04 Timber Frame buildings cannot be greater than 4 floors.

2.20 Gas Membranes

2.21.01 Appropriate testing shall be carried out to establish the design criteria for ground gas

and radon on the development site.

2.21.02 Where required an appropriate specification of gas membrane shall be installed across the ground floor slab in accordance with the requirements of the supplier. The membrane shall be placed and sealed by a specialist contractor who is suitably experienced and qualified. The membrane shall be sealed on to the cavity tray to the external walls and shall be sealed around all service entry points and columns using proprietary top hat connections. Where required by the supplier joints shall be pressure tested on site in accordance with those requirements.

2.21.03 Installation of the membrane on site shall be inspected and certified by a suitably experienced Environmental Consultant and the Contractor shall provide to the Consultant all pertinent records on installation works undertaken, including but not limited to:

- Copies of the product specification sheet,
- Copies of test certificates,
- Method statement for installation in accordance with the requirements of the supplier,
- Details of the installation undertaken and results of any on site testing,
- Copies of appropriate approvals/qualifications of the installation Contractor,
- Copies of any Construction Quality Assurance certificates required by the membrane supplier.

2.21.04 Prior to installation details of the proposed membrane are to be provided to the Environmental Consultant for approval along with copies of the method statement for installation and testing.

2.21.05 Measures shall be taken on site to store the membrane safely and also to avoid damage to the membrane during and following placement. Copies of all relevant documents including certification of the completed installation are to be provided to Premier Inn.

SECTION THREE – DEVELOPER (D) / TENANT (T) RESPONSIBILITIES MATRIX

The following sheets set out the Developer (D) / Tenant (T) responsibilities for all areas of a typical Premier Inn:

NOTE: All light fittings are supply and fix by the developer unless noted otherwise

	SUPPLY	FIX	NOTES
ENTRANCE LOBBY			
JOINERY			
Doors 2 x pairs automated sliding	D	D	Linked to fire alarm & electronic card locking system. Door to have Green Em Break Glass to override in event of emergncy
Skirting	D	D	
Glazed screens	D	D	
FINISHES			
Ceiling	D	D	
Wall	D	D	
Floors	D	D	
FIXTURES/FITTINGS & EQUIPMENT			
Mat well & frame	D	D	The whole floor is entrance matting
MECHANICAL & ELECTRICAL			
Audio intercom	D	D	Intercom By Developer
Night porter call button	D	D	See Whisdom
HVAC	D	D	
Lighting & electrical	D	D	

FOYER & RECEPTION			
JOINERY			
Auto Check-In Kiosks	T	T	
Check in Desk	T	T	
Signage	D	D	
Doors/frames/architrave/ironmongery	D	D	
Glazed screens	D	D	
Skirting	D	D	
FINISHES			
Ceiling	D	D	
Walls	D	D	
Floor – hard flooring	D	D	
Floor – carpet and underlay	D	D	
Naplocks	D	D	
FIXTURES/FITTINGS & EQUIPMENT			
Cooling equipment/ Aircon	D	D	
Corner guards	D	D	See Whisdom
Vending machines	T	T	To be installed post PC
Info panel	T	T	
Chairs	T	T	To be installed post PC
Reception Leaflet Holder	D	D	
Signage	D	D	Including curved reception panel
Tariff Board	T	T	
MECHANICAL & ELECTRICAL			
Music system	T	T	Developer attendance
HVAC	D	D	
Lighting & electrical	D	D	

Panic alarm system	D	D	
Hearing loop system	T	T	
Pager	T	T	Power only by Developer
Till systems	T	T	Attendance by developer (power only)

LIFT LOBBIES			
JOINERY			
Doors/frames/architraves/ironmongery	D	D	Linked to fire alarm/door system
Skirting	D	D	
FINISHES			
Ceiling	D	D	
Wall	D	D	
Floor – carpet and underlay	D	D	
FIXTURES/FITTINGS & EQUIPMENT			
MECHANICAL & ELECTRICAL			
HVAC	D	D	
Lighting & electrical	D	D	

GENERAL ADMIN OFFICE			
JOINERY			
Door/frame/architrave/ironmongery	D	D	
Skirting	D	D	
Desk	D	D	
Shelving	D	D	
Notice boards	D	D	
FINISHES			
Ceiling	D	D	
Walls	D	D	
Floor	D	D	
FIXTURES/FITTINGS & EQUIPMENT			
Chairs	T	T	To be installed post PC
Filing cabinet	T	T	To be installed post PC
First Aid box	T	T	To be installed post PC
Telephone handset and control box	T	T	Developer attendance
Music system	T	T	Developer attendance
MECHANICAL & ELECTRICAL			
HVAC	D	D	
Lighting & electrical	D	D	

BACK OF HOUSE CORRIDORS			
JOINERY			
Door/frame/architrave/ironmongery	D	D	
Skirting	D	D	
Wall Guards	D	D	
FINISHES			
Ceiling	D	D	
Walls	D	D	
Full Height Wall Protection on delivery routes	D	D	Specification on Whisdom
Floor	D	D	

MECHANICAL & ELECTRICAL			
HVAC	D	D	
Lighting & electrical	D	D	

COMMS ROOM			
JOINERY			
Door/frame/architrave/ironmongery	D	D	
Skirting	D	D	
FINISHES			
Ceiling	D	D	
Walls	D	D	
Floor	D	D	
FIXTURES/FITTINGS & EQUIPMENT			
Communication system	T	T	Attendance by developer. Cabling and containment only by developer
Comms Cabinet	D	D	
MECHANICAL & ELECTRICAL			
HVAC	D	D	
Power for Comms Cabinet and Wi-Fi	D	D	
Telephone DP Point	D	D	
Lighting & electrical	D	D	

MALE & FEMALE WCS			
JOINERY			
Door/frame/architrave/ironmongery	D	D	
Coat Hooks	D	D	
Skirting	D	D	
FINISHES			
Ceiling	D	D	
Walls	D	D	
Floor	D	D	
FIXTURES/FITTINGS & EQUIPMENT			
WC suites/cistern & lever	D	D	
Washbasins/wastes/taps	D	D	
Vanity units	D	D	
Urinals (gents)	D	D	
WC cubicles	D	D	
Mirrors	D	D	
Hand driers	D	D	
Toilet roll holders	D	D	
Baby Change Unit	D	D	
Soap dispensers	D	D	
Vending Machines	T	T	To be installed post PC
MECHANICAL & ELECTRICAL			
HVAC	D	D	
Lighting & Electrical	D	D	

WC LOBBIES			
JOINERY			
Door/frame/architrave/ironmongery	D	D	
Skirting	D	D	
FINISHES			
Ceiling	D	D	
Walls	D	D	

Floor	D	D	
MECHANICAL & ELECTRICAL			
HVAC	D	D	
Lighting & electrical	D	D	

UA WC			
JOINERY			
Door/frame/architrave/ironmongery	D	D	
Skirting	D	D	
FINISHES			
Ceiling	D	D	
Walls	D	D	
Floor	D	D	
FIXTURES/FITTINGS & EQUIPMENT			
Soap dispenser	D	D	
Hand dryer	D	D	
Toilet roll holder	D	D	
Mirror	D	D	
WC fitting	D	D	
WC seat	D	D	
WHB	D	D	
Waste	D	D	
WHB taps	D	D	
Sanitary encasement system	D	D	
Grab rails	D	D	
Hinged support rails with support legs	D	D	
Back Suppot	D	D	
Coat Hooks	D	D	
MECHANICAL & ELECTRICAL			
Alarm pull cord	D	D	
HVAC	D	D	
Lighting & electrical	D	D	

FOOD & BEVERAGE – CAFÉ BAR & BAR			
JOINERY			
Doors/frames/architraves/ironmongery	D	D	
Coffee Station	D	D	
Roller Shutter	D	D	
Breakfast buffet	D	D	
Skirting	D	D	
Dado rails	D	D	
Ceiling features	D	D	As per drawings
Drinks shelves	D	D	Detailed design
Screens/partitions	D	D	As per drawings
Fixed seating & upholstery	D	D	As per drawings
FINISHES			
Ceiling/bulkheads	D	D	
Walls	D	D	
Floors – carpets and underlay	D	D	
Floors - hard floorings	D	D	As per drawings
Loose Rugs	T	T	Model
FIXTURES/FITTINGS & EQUIPMENT			
Pictures/bric-a-brac	T	T	To be installed post PC
Tables, chairs, sofas, bar stools	T	T	Attendance by developer, to be installed post PC

MECHANICAL & ELECTRICAL			
Music system	T	T	Developer attendance
HVAC	D	D	
Lighting and electrical	D	D	
Table lamps	T	T	
All light fittings	D	D	
Scart Cable from Comms Room	D	D	

KITCHEN / BUFFET AREA			
JOINERY			
Doors/frames/architraves/ironmongery	D	D	
FINISHES			
Ceiling	D	D	
Walls (inclusive of 18mm full height plywood sub-layer to all walls) prior to final plasterboard	D	D	
Floors	D	D	
FIXTURES/FITTINGS & EQUIPMENT			
Kitchen equipment	T	T	Attendance by developer
MECHANICAL & ELECTRICAL			
Extract duct to external termination	D	D	
Firefighting equipment	T	T	Ansul system
HVAC	D	D	
Lighting & electrical	D	D	1st and 2nd fix of all power, as per the catering layout service details

STORE ROOMS Inc. CONSUMABLES STORE			
JOINERY			
Doors/frames/architrave/ironmongery	D	D	
Skirting	D	D	
FINISHES			
Ceiling	D	D	
Walls	D	D	
Floor	D	D	
FIXTURES/FITTINGS & EQUIPMENT			
Shelving	D	D	
MECHANICAL & ELECTRICAL			
HVAC	D	D	
Lighting & electrical	D	D	

STAFF ROOM			
JOINERY			
Doors/frames/architraves/ironmongery	D	D	
Skirting	D	D	
FINISHES			
Ceiling	D	D	
Walls	D	D	
Floors	D	D	
FIXTURES/FITTINGS & EQUIPMENT			
Mirrors	D	D	
Coat hooks & rail	D	D	
Lockers	T	T	To be installed post PC
Sink unit, taps, waste	D	D	
Kitchen units and worktop	D	D	

Tables, chairs	T	T	Loose furniture by Premier Inn post PC
Notice board	D	D	
MECHANICAL & ELECTRICAL			
HVAC	D	D	
Lighting & electrical	D	D	

STAFF WCS, SHOWERS & LOBBY			
JOINERY			
Doors/frames/architraves/ironmongery	D	D	
Skirting	D	D	
FINISHES			
Ceiling	D	D	
Walls	D	D	
Floors	D	D	
FIXTURES/FITTINGS & EQUIPMENT			
Soap dispensers	D	D	
Paper towel dispenser	D	D	
Toilet roll holders	D	D	
Mirrors	D	D	
WC fittings	D	D	
WC seats	D	D	
WHBs	D	D	
Wastes	D	D	
WHB taps	D	D	
Grab rails	D	D	
Hinged support rails	D	D	
Lockers	T	T	
WC cubicle partitions and doors	D	D	
Shower curtain rail	D	D	
Shower curtain	T	T	
Soap dispensers	D	D	
Shower Tray	D	D	
Tiles	D	D	
Shower taps	D	D	
Shower head	D	D	
MECHANICAL & ELECTRICAL			
HVAC	D	D	
Lighting & electrical	D	D	
Extract fan and duct	D	D	

MAIN STAIRS & LANDING			
JOINERY			
Doors/frames/architraves/ironmongery	D	D	
Skirting	D	D	
Balustrade	D	D	
Handrails	D	D	
Dado rail/pattress	D	D	
FINISHES			
Ceiling	D	D	
Walls above Dado	D	D	
Walls below Dado	D	D	
Floor - landings & stairs – carpet and underlay	D	D	
Nosings and edge trims	D	D	
FIXTURES/FITTINGS & EQUIPMENT			

MECHANICAL & ELECTRICAL			
HVAC	D	D	
Disabled refuge communications	D	D	
Lighting & electrical	D	D	

BEDROOM CORRIDORS			
JOINERY			
Doors/frames/architraves/ironmongery	D	D	
Skirting	D	D	
Dado rail	D	D	
FINISHES			
Ceilings	D	D	
Walls above Dado	D	D	
Walls below Dado	D	D	
Floor – carpet and underlay	D	D	
MECHANICAL & ELECTRICAL			
HVAC	D	D	
Lighting & electrical	D	D	

ALL BEDROOMS (UA Rooms developer to install all grab rails, alarms and any other statutory required items or those set out on Standard and Larger Room drawings)			
JOINERY			
Window board	D	D	
Doors/frames/architraves/ironmongery	D	D	
Skirting	D	D	
FINISHES			
Ceiling	D	D	
All walls (inc. Glazed Wall)	D	D	
Floor	D	D	
FIXTURES/FITTINGS & EQUIPMENT			
Door stop	D	D	
Spy hole	D	D	
Wall mirror	D	D	
Casegoods and bedbase	D	D	
Picture	D	D	
Fire procedure notice	T	T	
TV	T	T	To be installed post PC
Blind	T	T	
Mattress	T	T	
Tub chair	T	T	
MECHANICAL & ELECTRICAL			
HVAC	D	D	
Lighting	D	D	
Electrical sockets	D	D	
Electronic Headboard	D	D	
Headboard and TV control system	D	D	
Electronic door sign	D	D	
Telephone socket	D	D	
TV aerial point	D	D	
Hair dryer	T	D	
Room Key Card Switch	D	D	
Bedroom Heat Recovery System	D	D	
Multi criteria detector (smoke detector)	D	D	
Alarm sounder	D	D	
Alarm beacon	D	D	
Room AC unit & spur	D	D	
Room thermostat / Controller	D	D	

Consumer unit	D	D	

STANDARD BATHROOM			
JOINERY			
Door/frame/architrave/ironmongery	D	D	
Casegoods	D	D	
Vanity unit	D	D	
Skirting	D	D	
FINISHES			
Ceiling	D	D	
Walls	D	D	
Floor	D	D	
FIXTURES/FITTINGS & EQUIPMENT			
Door stop	D	D	
Robe hook	D	D	
Towel rail	D	D	
Mirror	D	D	
Shower screen	D	D	
Toilet roll holder	T	D	
WC	D	D	
WC cistern	D	D	
Washbasin	D	D	
WHB captive plug	D	D	
Chain hole stopper	D	D	
WHB taps	D	D	
Tap heads	D	D	
Shower tray	D	D	
Shower Waste	D	D	
Shower taps	D	D	
Shower head	D	D	
Soap dispensers	T	D	
MECHANICAL & ELECTRICAL			
HVAC	D	D	
Lighting	D	D	
Extract grille & duct	D	D	
Alarm Beacon	D	D	

LINEN STORES			
JOINERY			
Doors/frames/architrave/ironmongery	D	D	
Skirting	D	D	
Base unit	D	D	
Worktop	D	D	
FINISHES			
Ceiling	D	D	
Walls	D	D	
Floor	D	D	
Naplock	D	D	
FIXTURES/FITTINGS & EQUIPMENT			
Linen racking	T	T	
Shelving	D	D	
Washing machine	T	T	
Tumble dryer	T	T	
Glasswasher	T	T	
Johnson cleaning unit	T	T	
Notice board	D	D	
Sink unit and taps	D	D	

MECHANICAL & ELECTRICAL			
HVAC	D	D	
Lighting & electrical	D	D	
Heater	D	D	

INTERNAL ESCAPE STAIRS			
JOINERY			
Doors/frames/architrave/ironmongery	D	D	
Skirting	D	D	
Staircase & baluster	D	D	
Stair handrails & newel caps	D	D	
FINISHES			
Ceiling	D	D	
Walls	D	D	
Floor & stairs	D	D	
Nosing	D	D	
FIXTURES/FITTINGS & EQUIPMENT			
Sign: Fire Door Keep Shut	D	D	
Evacuation chair	D	D	1 per 2 refuge points at locations TBA
MECHANICAL & ELECTRICAL			
HVAC	D	D	
Lighting & electrical	D	D	
Disabled refuge communication	D	D	
Heating	D	D	

PLANT ROOM			
JOINERY			
Door/frame/architrave/ironmongery	D	D	
FINISHES			
Ceiling	D	D	
Walls	D	D	
Floor	D	D	
FIXTURES/FITTINGS & EQUIPMENT			Refer to Mechanical & Electrical specifications
MECHANICAL & ELECTRICAL			
HVAC	D	D	
Lighting & electrical	D	D	

BIN STORE			
JOINERY			
Doors/frames/architraves/ironmongery	D	D	
FINISHES			
Ceiling	D	D	
Walls	D	D	
Floor	D	D	
FIXTURES/FITTINGS & EQUIPMENT			
MECHANICAL & ELECTRICAL			
HVAC	D	D	
Lighting & electrical	D	D	

CCTV SYSTEM			

Cabling	T	T	
Technical Equipment	T	T	
Cable Tray & Containment	D	D	
Power Supplies	D	D	
MUSIC SYSTEM			
Cabling	T	T	
Technical Equipment	T	T	
Power Supplies	D	D	
Cable Tray & Containment	D	D	
ELECTRONIC CARD LOCKING SYSTEM	D	D	
INTRUDER ALARM SYSTEM			
Cabling	T	T	
Technical Equipment	T	T	
Cable Tray & Containment	D	D	
FIRE ALARM & DETECTION SYSTEM	D	D	
TELEPHONE SYSTEM			
Data Cabling	D	D	
Faceplates & Back Boxes to Bedrooms	D	D	Termination by Tenant
Technical Equipment	T	T	
Cable Tray & Containment	D	D	
Power Supplies	D	D	
Faceplates & Back Boxes to Public Areas	D	D	

Wi-Fi			
Data Cabling	D	D	
Technical Equipment	T	T	
Power Supplies	D	D	
Cable Tray & Containment	D	D	

INTERNAL SIGNAGE			
Internal directional signage	**D**	**D**	
Bedroom numbers	**D**	**D**	
Elec supply to illuminated signs	D	D	Reception and Cafe/Bar

EXTERNAL			
Signs, banners, totems	**D**	**D**	Attendance by developer
Grounds, founds etc. for fixing of signs	D	D	
Electrical supply to illuminated signs	D	D	
External lighting	D	D	
Car park barrier	D	D	
Building / façade lighting	D	D	

FIRE FIGHTING EQUIPMENT			
Fire extinguishers	**T**	**T**	To be installed post PC
Fire blankets	**T**	**T**	To be installed post PC
Fire procedure notices	**T**	**T**	To be installed post PC
Pattresses	D	D	Locations to be agreed based on the fire strategy with the developer

TV/RADIO			
TV aerial	**T**	**T**	Attendance by developer
TV Cabling	**D**	**D**	Termination by Tenant
Cable Tray & Containment	**D**	**D**	
Bedroom Faceplates & fixing	**D**	**D**	Termination by Tenant
FM Aerial	**T**	**T**	Attendance by developer

Radio Cabling	**D**	**D**	
Satellite dish	**T**	**T**	Attendance by developer (cabling and containment only by developer)
Amplification & racks	**T**	**T**	Location to be agreed (normally General Manager's Office)
BEDROOM TECHNOLOGY			
Smart TV box	**T**	**T**	
Guestroom Control Cabling	**D**	**D**	
VDA Guestroom Control Unit	**D**	**D**	
Headboard Room Controller	**D**	**D**	
Door Number Panel	**D**	**D**	

SECTION FOUR – BUILDING SERVICES REQUIREMENTS

4.1 INTRODUCTION

4.1.1 General Scope Of Mechanical Works

This Specification of Mechanical Requirements generally relates to the design, supply, installation and commissioning of all new mechanical services and associated controls required for this hub by Premier Inn development. Reference shall be made to the relevant Whisdom documentation for equipment specification and requirements. Competent mechanical designers and contractors shall be employed to determine and install all of the facilities required.

The M & E services contractor shall make reference to the detailed M & E services particular specifications for full details of the services installations.

Works shall include, but not be restricted to, the design, supply, installation, commissioning and setting to work of the following :-

- The mains cold water supply.
- The mains cold water storage system.
- The hot water generating system.
- The water pumping systems.
- The hot and cold water distribution system.
- The mains gas supply
- The gas distribution system.
- Sanitary ware, wastes and above ground foul water drainage.
- Ventilation systems, fans & controls.
- Heating and Cooling Systems and controls
- Calculating the Heating & Cooling demands for the development
- The installation of the heating and cooling systems
- Renewable technologies
- Controls wiring of all Mechanical Plant.
- The inspection, testing, commissioning and certification, of all the various elements of the mechanical installation.
- The supply of all operating and maintenance instructions on manufacturer's literature.

All Works shall be in full compliance with all current Statutory Regulations, British Standards, HVCA Standards and CIBSE Guidelines. Where there is doubt, the Developer shall consult with Premier Inn appointed M & E consultants in the first instance

4.1.2 General Scope of Electrical Works

This Specification of Electrical Requirements generally relates to the design, supply, installation and commissioning of all new electrical services and associated controls required for the proposed development. Reference shall be made to the relevant Whisdom documentation for equipment specification and requirements. Competent electrical designers and contractors shall be employed to determine and install all of the facilities required.

The M & E services contractor shall make reference to the detailed M & E services particular specifications for full details of the services installations.

Works shall include, but not be restricted to, the design, supply, installation, commissioning and setting to work of the following :-

- Provision of adequate power supply
- The mains installation
- The low voltage sub mains distribution system
- The complete small power & lighting systems
- The dimming and switching systems
- The emergency lighting systems

- The external lighting systems and signage power
- TV Network distributuion cabling
- Data cabling
- The earthing and bonding systems
- The fire alarm and detection system
- The Ventilation Fans & Controllers
- The electric heating
- The building lightning protection system
- The Wiring of supplies for all Mechanical Plant
- The Wiring of supplies for all other ancillary services e.g. CCTV Intruder alarm etc.
- The inspection, testing, commissioning and certification, of all the various elements of the electrical installation and ancillary services, i.e. fire detection system and emergency lighting, lightning protection system (where fitted)
- The inspection, testing, commissioning and certification, of all the various elements of the electrical installation
- The supply of all operating and maintenance instructions on manufacturer's literature

The IEE Regulations, 17th Edition Standards including latest amendments shall be deemed the Industry Standard for the purpose of these works. Where there is doubt, the Developer shall consult with Premier Inn appointed M & E consultants in the first instance.

4.1.3 Design Parameters

Design Standards

The Building Services Engineering systems should be designed and installed using the best principles of modern industry practice and in accordance with the Chartered Institution of Building Services Engineers Guides and Technical Memorandum. Guide A specifically states "The indoor environment should be designed and controlled so that occupants' comfort and health are assured. There are individual differences in perception and subjective evaluation, resulting in a base level of dissatisfaction within the building population. This dissatisfaction may be with a specific aspect of the environment or may be general and non-specific. The aim of design should be to minimise this dissatisfaction as far as is reasonably practicable."

4.1.3.1 Internal Design Conditions

EXTERNAL

- External design parameters; - (minus) 6°C to + (plus) 30°C

BEDROOMS

- Bedroom summer; Cooling is aimed at achieving 22°C in rooms at outside design conditions.
- Bedroom winter: The room heat losses will be calculated using CIBSE data. Generally heating is aimed at achieving 23°C in rooms

OTHER AREAS

- Foyer; 21°C
- Corridors and circulation stair wells; 18°C throughout year
- Front of House Toilets; 19°C
- Back of House Areas; 21°C
- Plant and Water Tank Rooms; 15°C (plant rooms heated where required)
- Staff Toilets; 18°C (Heated)
- Emergency Stairwells; Unheated
- Comms room; Heating and cooling to maintain a temperature in accordance with the equipment installed.

4.1.3.2 Ventilation Design Guidelines

The following design criteria shall be used to calculate the required ventilation flow rates within the specific areas.

- CAFE/BAR – 10lt/s/person with fan coil units or, 12lt/s/person with air handling plant (Occupancy levels are to be as per agreement for lease drawings)

- RECEPTION – 10lt/s/person. Occupancy calculations as per CIBSE Guide B
- BACK OF HOUSE AREAS – in accordance with CIBSE Guide B
- W/C'S – 6ACH, and in accordance with Building Regulations
- OFFICES – 10 lt/s/person in accordance with Building Regulations
- MAIN LINEN ROOMS – 10 ach/h in accordance with CIBSE Guide B
- UPPER FLOOR LINEN ROOMS (with white goods) – to achieve a minimum of 6 ach
- UPPER FLOOR LINEN ROOMS (without white goods) –to achieve a minimum of 2 ach/h
- PLANT ROOM VENTILATION – in accordance with BS6644
- KITCHEN VENTILATION – in accordance with DW/172
- FOOD PREP – to achieve minimum 20 ach/hr in accordance with DW/172
- GLASS WASH – Minimum of 25 ach/h depending on equipment installed
- INTERNAL BIN STORES – Minimum of 20 ach/h

Where areas are not covered above the Developer shall meet the requirements of Building Regulations as a minimum and consult with Premier Inns appointed M&E consultant.

4.1.3.3 DHW & CWS Systems

DHW design consumption shall be 80 litres/room per day at 60°C. DHW storage and generation shall be sized to supply 50% of the total usage during a 1½ hour period each morning and 50% of the total usage during a 2 hour period in the evening.

DHW must be available at all times (day and night), with equipment having built-in redundancy. The design maximum waiting time for DHW shall be 10 seconds to all points of use and designed in accordance with BS EN 806.

Ensure all water systems in the building are designed in compliance with the measures outlined in the Health and Safety Commissions Approved Code of Practice and Guidance Document L8 and the Health and Safety Executive's "Legionnaires' disease - The control of legionella bacteria in water systems". Approved Code of Practice and guidance 2000

Ensure that the hot water temperature delivered to all public area taps, showers and baths are regulated in accordance with Water Regulations. The below temperatures are to be set for each bedroom en-suite appliance:-

- UA Basin 43ºC – TMV Mixer Under WHB
- UA Bath 46ºC – TMV Bath / Shower Mixer
- UA Shower 46ºC – TMV Shower Mixer
- Standard Basin 43ºC – TMV Mixer Under WHB
- Standard Bath 48ºC – TMV Bath / Shower Mixer
- Standard Shower 46ºC – TMV Shower Mixer

Cold water storage shall be provided to a minimum of 85 litres per bedroom, with the actual amount of storage agreed with local water supply company. The complete domestic water distribution system shall be supplied from the cold water storage tank – no point of use shall be mains fed. The tank shall be complete with high and low level alarm system which will be wired to the "Plant Failure Alarm" panel located within the administration office. The tank shall be internally split with separate ball valves, overflows etc. to each section and insulated.

4.1.4 Maintenance Access and Plant/Equipment Positions

The Developer shall be responsible for the provision of adequate unobstructed maintenance access for regular inspection and replacement of parts and plant to all plant and equipment installed by the Developer under this contract. The Developer shall not only consider the plant and equipment installed under His contract but also of others in relation to location and achieving suitable access/maintenance clearances.

All proposed plant and equipment locations both internally and externally, complete with dimensions of all access routes and maintenance access areas shall be detailed on a drawing/s by the Developer and issued to Whitbread for comment prior to construction.

Generally, as a minimum all access and maintenance access shall be as required by the manufacturers of the individual item of plant and equipment. Also as a minimum all access routes shall be as required by CDM, H&S, British Standards and Building Regulations requirements. Ultimately the responsibility for the provision of suitable access for maintenance shall remain with the developer.

Access hatches to service risers for maintenance shall not be located within the hotels bedrooms or bedroom bathrooms under any circumstances. Where required, access to all service risers in corridors shall be to the approval of Whitbread. (Access to these hatches shall be clear from obstruction and easily accessible).

The developer must design out the requirement for access hatches in bedroom corridors but in circumstances where this is not possible all access hatches must be approved by Whitbread prior to construction.

The developer shall also consider the location of plant and equipment both internally and externally. The developer shall provide drawings detailing the proposed location for all plant and equipment to Whitbread for approval. Generally all plant and equipment positioned outside, adjacent or above bedrooms is to be avoided.

It is required that an extended staircase (not a ladder) be installed as the primary roof access route for maintenance, which is capable of being secured to ensure no public access.

4.1.5 **Plant Decks and Plant Screening**

Plant decks are to be constructed from steel to create either a fixed structure with steel upstands and rigid steel frame or pre-manufactured steel plant deck system such as the Big Foot system. The developer shall ensure that the required support is installed for the weight of the plant proposed for the deck and complete with suitable steel walkways and the required access railings and steps in compliance with CDM and H&S requirements. The structure is also to be complete with the required acoustic and anti-vibration treatment in accordance with the recommendations of the developer's acoustic consultant. Where deemed required for planning, screening shall be manufactured from steel or similar material and weather treated. Where deemed required for acoustic reasons the screening shall be as manufactured by a reputable acoustic manufacturer to achieve the required noise reduction as defined by the developers acoustic consultant.

Under no circumstances shall the plant deck, access walkways, supports railings or steps or the screening be manufactured from wood.

4.1.6 **Plant & Equipment Replacement Strategy**

The Developer shall provide during design stage a comprehensive plant & equipment replacement strategy for all items of plant and equipment to be installed. The strategy must be compliant in all aspects with current H&S and CDM requirements and be complete with method statements. The proposals shall be reviewed by Whitbread and where required, comments shall be provided.

The strategy and method statement documents shall be included within the sites Health and Safety File.

4.2 INCOMING SERVICES & INDICATIVE PLANT LOADS

4.2.1 Incoming Services

Whitbread have energy and meter agreements in place with their preferred shippers and meter operators for gas and electricity. The developer shall request these details from Whitbread and make the necessary applications to these companies through Whitbread's Energy consultants.

Under no circumstances will Whitbread accept or enter in to an agreement with others to supply the mains services (Water, Gas or/and Electricity) for the site. All meters will be sited within the demise of Premier Inn.

Sub metering shall only be provided by the developer as detailed within this document.

To assist the developer a schedule of services is provided in the matrix below:

4.2.2 Gas Installation

A new natural gas supply shall be provided from the local gas network to the new gas meter position. The new supply will be suitably rated to adequately serve all appliances, plant and equipment and shall be terminated with a suitably sized gas company meter.

The meter will be applied for and installed by the developer and the meter operator and shipper shall be as confirmed by Whitbread's approved energy company.

A new gas mains service shall be extended from the new meter installation to provide a complete gas distribution system to serve the Water heaters and mechanical plant.

Independent sub-metering facilities for the main items of plant shall be provided and installed in accordance with Building Regulations and CIBSE TM39:2006 and include pulsed outputs capable of being connected to a Building Energy Management System (BEMS)

On the gas supply to the plant room gas fired water heaters, the developer shall supply and install a suitably sized solenoid valve linked to the fire alarm system (Shut On Alarm) along with thermal links (1 No. per heater) and emergency shut off button located by the exit door, activation shutting the gas valve, the gas valve will automatically reset. The system shall comply with BS 799.

All gas pipework shall be sized to comply with the maximum pressure drop requirements, based upon the minimum dynamic pressure provided at the meter by the gas supplier. All gas pipe work to be identified in accordance with BS1710 and painted yellow along its entire length.

4.2.3 Water Installation (noisy pipe work and reducing valves)

A new mains water supply will be provided from the local water company network to the new water meter position. The water main shall be extended from the meter position to provide a distribution network within the hotel via the cold water storage tank(s) and booster set (or via a break tank and booster set if water storage at high level). At the point of entry, a suitably sized main isolation valve and drain valve. . The complete potable water installation is to comply with local water company Byelaws and Water Regulations. All sanitary ware fixtures and pipework fittings are to be WRAS approved.

The new supply will be provided to cater for all Domestic Hot Water (DHW) and Cold Water Service (CWS) requirements of the hotel. Valved hot and cold water supplies are to be provided within each linen room for the installation of White goods post completion by Whitbread. The cold and hot water installation is to comply with Water Regulations.

Provide independent sub meters in accordance with Building Regulations and CIBSE TM39:2006 to allow the metering of individual water-consuming plant or building areas, where demand in such areas will be equal to or greater than of 10% of the total water

demand of the building. (E.g. plantrooms and kitchens) Ensure sub meters are provided with pulsed outputs.

All pipe work is to be identified in accordance with BS1710.

If required by Building Control, a dry / wet riser system shall be installed in accordance with BS 9990/BS 9999.

A suitably located fire hydrant, for fire-fighting purposes must be established for all schemes as standard, even if not necessarily stipulated by Building Control.

In areas where the local water supplier will not guarantee the required water flow rate for a fire hydrant this must be raised with Building Control with measures/steps being agreed with BCO/FO to meet the requirements. The developer shall be responsible for the installation and all associated equipment to satisfy the requirements of providing the flow rate as detailed in BS 9990:2006.

A suitably located fire hydrant, for fire-fighting purposes must be established for all schemes as standard, even if not necessarily stipulated by Building Control.

4.2.4 Electrical Installation

A new LV electrical mains supply will be provided from the local electrical company and terminate at an agreed isolation and meter point. A designated main distribution panel, incorporating all necessary over current protection devices and mains switch shall be provided by the developer. The new main will be suitably rated to adequately serve all lighting, heating/cooling, appliances, plant and all other equipment.

A new adequately sized mains main distribution panel board/ cubicle shall be installed at the incoming mains position. The board shall be equipped with a main incoming 4 pole isolator and single and three phase MCCB's of appropriate ratings, to feed sub-mains and final circuit distribution boards and isolators supplying large fixed loads. An earth bar shall be mounted adjacent to the incoming mains distribution board and shall consist of a copper bar 25mm wide x 6mm thick and not less than 150mm long to allow connection of the building steel work if appropriate, main services bonding conductors and the Electricity Supply Company earth terminal. Equipotential bonding shall be provided from the main earth bar to the electrical installation and all other required items (including ventilation ducting, service pipes, sinks, etc.).

Independent sub-metering facilities for the main plant shall be provided and installed in accordance with Building Regulations and CIBSE TM39;2009. Separate accessible energy sub-meters, labelled with the end energy consuming use, are provided for the following systems (where present) as a minimum:-

- Space heating
- Domestic hot water
- Cooling
- Fans (major)
- Lighting
- Small power (lighting and small power can be on the same sub-meter where supplies are taken at each floor)
- Sub-metering guest rooms – (by floor plate)
- Other major energy-consuming items where appropriate
- Provide auto power factor correction equipment selected to achieve an operational power factor of 0.95 or better complete with separate isolation and circuit protection and maintenance bypass.

The meter will be applied for and installed by the developer with the shipper and meter operator being confirmed by Whitbread's approved energy company.

4.2.5 Telecommunications Installation

The developer is responsible for providing, liaising and coordinating the complete incoming telecommunication installation with Whitbread and all other associated parties. The ordering of the main hotel incoming telecommunication lines is undertaken by Whitbread. Please note that any specialist phone lines required for site specific items (e.g. CHP, BMS, etc.) do not form part of the Whitbread order and a separate order for these phone lines is to be undertaken and provided by the developer.

The developer is to register the site with BT new sites within the first month of starting on site. The BT new sites registration number and site address is to be issued to Whitbread to allow the hotel lines to be ordered.

The developer is to provide three 90mm ducts, complete with draw wires and easy bends from the site boundary to DP position within the comms room. The exact positions are to be agreed with Premier Inn. If the DP cannot be located in the comms room, then the developer is to notify Whitbread and provide drawings of its proposed location for approval. The developer is to ensure that the DP is installed a minimum of 10 weeks prior to PC.

If the BT DP position is not by the coms unit (office or coms room) then a 25 pair cable needs to be provided by the developer's electrician from the DP position to the comms unit position

4.3 MECHANICAL INSTALLATION

4.3.1 CWS Installation

Cold water installation shall be piped to all proposed points including pods (If Applicable) of use with light gauge copper tube or Uponor MLCP Press System. All internal (concealed and exposed / pod pipework) and external pipe work shall be thermally insulated throughout its entirety. The cold water distribution system shall be fed from the cold water storage tank via the variable drive booster pump set, sized to meet the maximum demand of the hotel plus 25% and to achieve a minimum 2.5 bar pressure at the furthest outlet. The system shall incorporate a buffer vessel of sufficient size to minimise pump operation.

Level handle isolation valves are to be provided to each room and each floor/ riser and located in a suitable location for ease of access. Individual isolation valves are to be provided to each appliance within the bedroom bathrooms with valves located in the vanity unit below the basin

A cold water supply complete with bib tap shall be provided to bin stores and refuse areas complete with protective cover and appropriate backflow prevention device

Any pipework located externally or within unheated plantrooms are to be doubled insulated to prevent freezing of cold water services.

An Electronic Sentinel Kalguard water conditioning system (subject to hardness) or Salt Based Duplex Water Softener shall be provided and installed to the CWS at the point of entry to the building and on the hot water return system if required. The Developer shall carry out a sample test of the local water supply to determine the requirements for water conditioning, and where required provide the appropriate level of conditioning

4.3.2 DHW Installation

Domestic hot water shall be piped throughout including pods (If Applicable) using light gauge copper tube or Uponor MLCP Press System. All internal (concealed and exposed / pod pipework) and external pipe work shall be thermally insulated in accordance with BS 5422; 2001 and comply with current Building Regulations. A secondary return system will be installed to cover all areas in compliance with Health and Safety Executive Code L8, complete with appropriately sized bronze circulation pump. The cold water boosted system will supply the domestic water heaters to ensure comparable pressure in both systems.

NOTE – Temp gauges will be installed on BCWS / DHWS F&R within the plant area, in addition in Scotland temp gauges will be provided at ALL Sentinel points

Lever handled isolation valves are to be provided to each room and each floor/ riser and located in a suitable location for ease of access. Individual isolation valves are to be provided to each appliance within the bedroom bathrooms with valves located in the vanity unit below the basin.

The domestic hot water shall be generated by a number of gas fired high efficiency water heaters, as manufactured by Andrews from their Maxxflow range of units (see Typical Plant Schedule Section 6). The units shall be installed in accordance with the manufacturer's instructions/recommendations and shall incorporate a Corex powered anode protection system each wired to a local fused spur connection (neon). Flues shall be available from Andrews and installed as per their recommendations. Plant room ventilation will be required and may be either mechanical or natural depending on plant room location and shall be in accordance with BS 6644.

Note – All Baxi water heaters shall be set top operate at 60°C and no higher, in addition all Baxi water heaters shall be commissioned by Baxi to ensure 2 year warranty provided.

In instances where a flue dilution system is required the developer shall provide 2No fan proving switches wired in parallel for duty and stand-by purposes allowing the system to operate on one switch whilst the other is repaired.

A link capable of carrying a fault condition signal (audible or visual) from each water heater, secondary return pump, flue dilution system, high and low level alarms in cold water storage tank and booster set(s) shall be connected to a "Plant Failure Alarm" panel located in the comms tower within reception (This will be integrated into the disabled alarm panel) along with BMS interface.

If CHP is required, provide gas sub-metering in accordance with CHPQA guidance note 14 and with full integration connectivity enabling the meter to be connected to a BEMS at a later date. The CHP's are to be used to pre-heat the incoming cold water supply feeding the water heaters.

A standalone external phone line to each CHP is to be provided by the CHP supplier as part of their package with the line rental included within the maintenance cost of the unit. Liaise with the supplier to coordinate specific requirements.

Provide a control and protection system fully compliant with the requirements of the Electricity Council Recommendation G83 or G59/1 and ETR113, which govern the connection of generators to the public electricity supply. Arrange for G83 or G59 inspection and sign-off prior to the commissioning period to ensure that the unit can be commissioned and handed over fully operational.

Provide suitable supply and extract ventilation provisions to meet the ventilation requirements for the CHP units.

Provide the CHP(s) with sufficient storage capacity via calorifiers to enable the CHP(s) to operate for a minimum 20 hours per day each. Sizing is to take into account daily hot water usage and occupancy diversity of 85%. Technical calculations to support the selection must be submitted for approval by Whitbread

4.3.3 Heating and Cooling

4.3.3.1 Guest Bedrooms

The Guest Bedrooms will be heated and cooled using an approved VRF (Variable Refrigerant Flow) system. The required VRF system is detailed below, together with details of the refrigerant volume limitations and control systems. The specific design and control parameters shall be subject to approval by Premier Inn. The Premier Inn preferred manufacturer is Mitsubishi and the system as a whole shall be selected from their City Multi range of equipment. The nominated installer of the selected Mitsubishi Electric system must be a member of the Mitsubishi Electric Business Solutions Partner Programme to achieve the 7 year warranty as required by Premier Inn.

The external units shall be located in an approved location (as detailed earlier in this document) and shall be selected from the latest City Multi range of R2 Series High COP simultaneous heating and cooling units with heat recovery sized to meet the required capacities of the systems they are linked to in accordance with the manufacturers design guidelines. Where the units are located near an aggressive atmosphere ie Saline then the Condensers will have suitable treatment.

The indoor units shall be wall mounted units located above the bedroom door. The indoor fan coil units shall be the MSZ-SF15VA wall mounted units, provided complete with LEV kits located in the corridor to allow connection to the VRF system.

The installation of condensate pumps is to be avoided and only installed subject to approval by Whitbread. The gravity condensate drain shall be installed as per the details on Whisdom with condensate pipe work running from the FCU at the correct gradient and terminating at the SVP within the bathroom riser complete with in-line dry trap. All condensate pipework is to be in rigid plastic construction with adequate support at regular intervals from the local structure. The developer shall ensure that access to the in-line dry trap is possible at all times and that, if required; the trap can easily be removed and replaced.

Access to the PCB controller, refrigerant pipe work connections and condensate drain are to be as per the manufacturer's recommendations.

The electrical supply to the FCU shall be via an unswitched fused spur connection located adjacent the unit in an easily accessible location.

The Branch Controller (BC) box links the internal units to the external units. The BC box shall be located within back of house areas such as the linen rooms or store rooms. Access to these units will be required with sufficient space to allow for the removal and replacement if required. The installation of these units shall not affect the standard ceiling heights within the proposed area. If the ceiling height will be affected the developer must inform Whitbread for approval.

BC Boxes are to be provided with condensate pipework connecting into the local SVP drainage stack. All condensate pipework to be rigid plastic construction with adequate support.

Provide a refrigeration leak detection system as supplied by Mitsubishi Electric UK to comply with BSEN 378 leak detection guidelines. The system will be designed to detect a leak within each guestroom through the use of an aspirated detector system with audible and visual alarms in both the guestrooms and the Reception Area Comms Tower.

The system shall include eight-way (KS8-IR8C) and/or sixteen-way (KS8-IR16C) aspirating leak detection panels used in conjunction with stainless steel faceplateleak detectors (KS8-SSFP/A) complete with audible and visual alarm. The leak detectors are to be installed at floor level within each guestroom close to the indoor fan coil unit as indicated on the model drawings on Whisdom.

The system shall include KS8-RDU remote display unit(s) located in the reception area comms tower. Each remote display unit can connect up to 6no.aspirating leak detection panels, via a standard Ethernet connection.

If a leak detection system is required complete with refrigerant pump down facilities to fulfil BREEAM requirements the following system should be installed instead of the refrigerant leak detection only system outlined above. A refrigerant gas detector is to be installed at floor level within each guestroom close to the indoor fan coil unit as indicated on the Whisdom drawings. The detector shall be connected to the fan coil via CN52 and in the event of a gas detection, a signal will activate the motorised gas isolation valve on the high pressure pipeline between the condenser unit and BC controller, the condenser unit will be switched into pump down mode. After a set period a second signal will be sent to the motorised gas isolation valve on the low pressure pipeline between the condenser and BC controller, the VRF condenser will then be shut down.

An MEUK approved engineer will be required to attend site to commission and upgrade the software on the outdoor unit.

In order to ensure that the correct parameters and settings are being used for the AC installation, the contractor must contact Mitsubishi Electric UK, Kerry.Mooney@meuk.mee.com (Telephone: 0870 3000 070). It is the responsibility of the contractor to make the relevant contact with the manufacturer to ensure the system is commissioned in accordance with Whitbread's requirement

Bedroom System Controls

Each bedroom AC unit is to be controlled via the bedhead room control panel which will provide the following functions;

- On/Off
- Fan Speed

Bedroom AC is to be programmed to have set back temperatures with the following upper and lower limits respectively; 24°C and 18°C as implemented by VDA and operate at 21°C

AUTO when a guest enters the room. The automatic operation of the AC with the PIR is only to occur during the hours of 4pm to 10am
The fan speed settings are to be set as follows:-

Fan Setting 1 – Ultra Low
Fan Setting 2 - Low
Fan Setting 3 – Low (to remain operating at fan setting 2

The temperature readings within each room are to be taken from the built in return air sensor in the AC unit.

Each bedroom controller shall be linked to its corresponding centralised controller. The centralised controller shall be the AE200 which is capable of linking up to 50 indoor units. Each AE200 controller shall be located within the Administrators office at ground floor level (or other location as agreed with Whitbread). Each controller will require an unswitched fused spur power unit.

Each one of the AE200 units shall then be linked in to the central Mitsubishi Melcotel controller which again is to be installed within the Administrators office adjacent to the G150 units.

Within the Administration Office the controllers shall be so positioned that access to the controllers for maintenance will not cause disruption to the staff working in the office.

The developer shall request a copy of the control strategy document for the bedroom systems from Whitbread prior to commissioning of the installation.

The developer shall inform Whitbread when the control strategy is to be programmed so this can be witnessed by the Consultants.

An MEUK approved engineer is required to attend site to commission the installed VRF systems and communication gateways so that control of the bedroom AC can be undertaken by VDA. Allow for all necessary liaison between VDA and Mitsubishi UK to allow the effective commissioning and operation of the system

4.3.3.2 Ground Floor and Public Areas

The Entrance, Reception, and Cafe/Bar areas will be heated and cooled by means of a localised VRF system as manufactured by Mitsubishi Electric from their City Multi range of equipment. The nominated installer of the selected Mitsubishi Electric unit must be a member of the Mitsubishi Business Solutions Partner Programme to achieve the 7 year warranty required by Whitbread.

The developer shall provide a system for the bar and Cafe/Bar area and a system for the reception and foyer area. The equipment shall be selected from the PEFY-P-VMA-E range of void mounted ducted fan coil units or the PEFY-P-VMH-E range of high static pressure void mounted ducted fan coil units if system resistances are higher than those available for the VMA units. The fan coil units shall be ducted from the front of the unit to each grille position within the ceiling.

Access to the PCB controllers, refrigerant pipe work connections and condensate drain shall be via suitable access hatches or return air grilles. The developer must ensure that access to the unit is provided without the need to remove the FCU from its hangers. A minimum clearance of 250mm will be required for access infront of the face of the PCB controller.

Fresh air is to be provided via the Mitsubishi Lossnay Heat Exchange units selected from the LGH-RX5-E range of units. These units shall be sized to provide each area with the required fresh air in accordance with the requirements of this specification and Building Control requirements.

Both fan coil units and Lossnay units shall be hung from the floor structure above with suitable drop rods/hanger complete with anti-vibration points to isolate the units from the structure and to prevent vibration passing through to the floor structure above.

The distribution of air shall be via suitably sized spirally wound galvanised steel duct work which is to be in accordance with DW/144 and TR/19 for cleaning. The distribution system shall be insulated throughout its entirety in compliance with Building Regulations. The systems shall be complete with all ancillary equipment such as balancing dampers (complete with lockable handles), fire dampers, smoke dampers, attenuation, flexible connections and anti-vibration hangers as required to ensure correct operation of the system. Duct work is to be clearly labelled. Rigid duct work is to terminate within 500mm of each grill position to allow final connection by flexible duct work which is to be pulled taut. Under no circumstances is duct work to be left sagging on top of ceilings or equipment. Under no circumstances shall flexible duct be crushed/flattened or pulled at such an angle that the free area of the duct is reduced. Each grille shall be complete with plenum box and spigot connection and opposed blade damper for fine tuning during commissioning. The systems shall operate at low velocity to minimise noise levels and draughts. Consideration shall be given to the location of the external louvers for intake and exhaust to eliminate cross contamination of the systems or pulling in contaminated air i.e. bin stores, heat dumps etc.

The Lossnay units shall not supply air directly to the area. Duct work from Lossnays shall be ducted and terminate within 500mm of the air intake of the respective fan coil units adjacent the fan coil units re-circ grille within the ceiling. Extract from the room is to be ducted directly to the Lossnay unit only.

Positioning of the supply and exhaust grille shall be considered to provide an even flow of air distribution throughout the area to be ventilated and heated and cooled. There are to be no cold spots within the areas.

In certain circumstances where the preferred option above is not possible, a suitably sized packaged Air Handling Unit (AHU) may be considered to provide both tempered and cooled air to each area. A controller for the AHU will be required and located in the glass wash/back bar area. The controller will be remote to the main AHU controller with the basic functions for operation. If external, the AHU shall be positioned such that it cannot be directly viewed from hotel bedrooms and shall be fitted with anti-vibration mountings to minimise any noise break-in. The AHU shall be fitted with DX coils (to provide the heating and cooling), frost protection circuit, filter section incorporating disposable panel filters and fan section.

The principle of the air distribution system from the AHU is to be as the VRF systems detailed above.

External condensers shall be selected from the City Multi range of R2-series High CoP units (PURY-EP-Y(S) JM-A High COP simultaneous heating and cooling units with heat recovery external condenser units) and shall be located in a suitable area either on the roof in a dedicated external plant area (as agreed with Whitbread), away from the building in a dedicated plant yard or adjacent the buildings gable end. Under no circumstances shall the condensers be located beneath or adjacent bedroom windows.

Supplementary heating (via recessed and/or surface mounted electric overdoor air curtains) will be provided in the entrance area above opening doors/high heat loss areas as required. Air curtains are to be installed on the lobby side of the inner doors and provided by Dimplex as indicated on the Whisdom drawings, model reference CAB10ER.

4.3.3.3 Ground Floor Front of House Area Controls

The controls for the Cafe/Bar, bar, reception and foyer VRF systems shall be as manufactured by Mitsubishi. During design the developer shall look at the best option for providing adequate levels of control for the systems to each defined area.

Controls for each area will consist of a single controller (PAR-30MAA-J remote controller), which will be located in the administration office and will allow for the following;

Fan Coil Units;

- On/Off
- Fan Speed control – auto, low, medium and high
- Mode Selection
- Temperature setting
- Setpoint limit
- Timer Operation Ventilation Interlock – allows the group to be interlocked with the heat recovery Lossnay

The remote controls shall be linked in to a central AG150 controller which will have the required settings.

The developer is to request the control parameters for the front of house areas from Whitbread prior to commissioning.

The developer shall advise Whitbread of the date for the proposed commissioning of the systems so that the setting of the controls parameters can be witnessed.

4.3.3.4 Office Heating & Cooling

The General Manager's office, Administration Offices and Team Room will require heating and cooling via independent wall mounted units.

The units controller shall be mounted to the wall adjacent the unit but at a height that is easily accessible.

The systems shall be installed in accordance with the manufacturer's recommendations.

4.3.3.5 Comms Room (s)

The comms room (s) will require a cooling system and shall be stand alone. The developer shall provide a unit sized to accommodate the heat loads of the equipment to be installed and set to achieve the required temperature within the room as advised by the equipment manufacturers. A notional cooling allowance of 3kW should be allowed for until the information has been provided at which point the developer will then confirm the actual cooling load required. The condenser shall be located within a suitable area away from bedroom windows and shall be easily accessible for maintenance.

The units controller shall be mounted to the wall adjacent the unit but at a height that is easily accessible.

Air conditioning is also required to each intermediate comms rooms located on the bedroom floors. Provide a wall mounted AC unit in each room that are fed from the local bedroom VRF system. Ensure the unit controls are programme to allow effective control of the AC in the intermediate comms room.

4.3.3.6 Electric Heating

Other ground floor areas which typically have relatively small heat loads i.e. public toilet and stairs provision shall be made by the electrical contractor to provide a fused connection unit only. The buildings back of house heating systems will not include any LPHW system/radiators.

Note Linen Rooms will not require any heating unless there is an external access door provided ie Ground Floor (In all cases where heating is provided in Linen Rooms this will be via Oil Filled Radiators)

Where required due to excessive heat loss, the Mechanical Contractor shall suitably size and locate the electric panel heaters and advise the Electrical Contractor accordingly, in other areas the Electrical Contractor shall install switched fused connection units only for future panel heaters.

Supplementary heating (via recessed and/or surface mounted electric overdoor air curtains) will be provided in all entrance lobby areas above opening doors/high heat loss areas as required.

The units shall be electrically heated and be Diffusion Mirage Overdoor Heaters or equal and approved c/w Remote fan speed and temperature controls will be required located on the Comms Tower.

4.3.4 Ventilation

4.3.4.1 Guest Bedrooms

Air shall be supplied to each Guest Room and extracted from each Guest Shower Room at a minimum continuous flow rate of 16lt/s (based on 2 occupants at 8l/l/p, or as approved by the Building Control Officer) from a centralised ducted system.

The developer shall install a central supply and extract ventilation system to serve all bedrooms. At each room, provide supply and extract branches with volume control dampers (VCD) and fire dampers (FD), accessible from the corridor, and extend branches to connect to the supply and extract air valves in the positions shown on the model Hub drawings. Consideration can be given to the use of combined volume control and fire dampers.

Both supply and extract installations are to be complete with VCDs for commissioning purposes and fire dampers which will be accessible from the corridor. Air valves are to be provided with a locking nut and locked in the fully open position and not used for air balancing.

The ventilation ductwork is to be fire rated in accordance with Approved Document B when passing through any escape routes. The duct work shall be spirally wound galvanised steel and insulated throughout its entirety. The system shall be designed to meet the ventilation requirements of each bedroom type and its occupancy in accordance with Approved Document F of the Building Regulations.

The supply and extract ducts shall be connected to a suitably sized ErP 2016 compliant Air Handling unit (AHU) complete with high performance supply and extract EC fans, heat recovery section, electric frost coil, DX heating and cooling coil, condensate tray and drain, and on board control panel. The AHU and system shall be compliant with the requirements of Approved Document L of the Building Regulations.

All AHUs are to comply with Ecodesign for Energy-Related Products and Energy Information (Amendment) Regulations 2015. As a minimum AHUs should meet the following performance criteria:

Design Criteria	Value
Minimum external temperature	-6°C
Maximum external temperature	30°C
Summer maximum supply air temperature	24°C
Winter Minimum supply air temperature	20°C
Minimum heat recovery efficiency	67% **

** (or 73% in AHUs are to be ordered after 1st January 2018)

When selecting heat exchangers, the order of preference for the heat exchanger arrangement is; counter flow, cross flow and finally thermal wheels. Thermal Wheel heat exchanges should only be utilised when it is not practicable to use an alternative heat exchanger.

Minimum SFPs are to be an improvement on the values outlined in the current revision of the Non-Domestic Building Service Compliance Guide

Filters should be provided with an electric heater battery or frost coil to protect against frost build-up on the filters.

The AHU shall be complete with no-volt contacts and linked to the 'Plant Failure Alarm' panel which is to be located within the reception area comms tower.

The AHU shall be located within a suitable position and be complete with anti-vibration and acoustic treatment as advised by the developer's acoustic consultant to ensure that vibration transfer through the structure is avoided and the internal noise criteria for each bedroom is achieved. The plant shall not be positioned above rooms.

The condensate shall rely on gravity and shall not be pumped. The drain shall be connected to the nearest SVP and shall be complete with dry trap.

The developer shall ensure that the centralised bedroom ventilation systems comply with Approved Document B of the Building Regulations and be complete with fire rated smoke dampers linked and operated by the fire alarm system.

The developer is to ensure that inlet locations are not situated near pollutant sources.

4.3.4.2 Ground Floor Public Toilets

The public toilets ventilation systems shall be complete with plate heat exchange unit and fans. The systems shall be complete with cross talk attenuation where required to prevent the transfer of sound from one area to another if multiple W/C's are to be fed from one system. The system shall be complete with spirally wound galvanised steel duct work, flexible connections, VCD's, fire/smoke dampers, attenuation, and anti-vibration hangers etc. The systems shall be operated via the lighting circuit PIR of its respective area and be complete with overrun facility of 15 minutes. The systems shall be balanced and achieve the ventilation rates as detailed in CIBSE Guidance/Building Regulations – nominally 10 air changes per hour. The systems shall be complete with extract air valves and supply air louvers suitably installed within the area to achieve a good air movement through the area. The ducts shall terminate via the external elevation to suitably sized wall louvers. The air intake louvers shall be located in positions so as to avoid contaminated air being drawn in to the subsystem from bin stores, plant areas etc.

4.3.4.3 Ground Floor Areas

Fresh air will be supplied to the ground floor Cafe/Bar, bar and reception areas as detailed earlier, either via a centrailised AHU or via localised Lossnay heat recovery units.

In both instances extract shall be as part of the general system installed. The extract system shall be designed to achieve a slight positive pressure within the ground floor public areas (to minimise draughts).

4.3.4.4 Other Ventilation Systems

4.3.4.4.1 Linen Rooms / Offices

Ventilation systems shall also be installed within linen rooms, staff rooms (including staff lockers and w/c's), admin office and general manager's office to achieve the design criteria as detailed earlier. In areas with individual supply and extract systems, a plate heat exchange unit shall be installed to recoup heat from the area. The installation of door transfer grilles in doors that are directly on to fire escape routes will not be accepted under any circumstances. The undercutting of fire doors will not be acceptable in any doors throughout the development.

4.3.4.4.2 Glass Wash / Prep Kitchen

The glass wash ventilation systems shall be designed to meet the ventilation requirements as detailed above. The system shall be controlled via a localised controller situated within the glass wash area. The system shall be a dedicated system serving the glass wash area only. The system shall be complete with extract and air make up via a heat exchange unit.

Where the glass wash is located within the kitchen, the system is to be expanded and extended to provide supply and extract above the free-standing fridge and freezers.

4.3.4.4.3 Internal Bin Stores

Where an internal or enclosed bin store with no external lourvres is proposed a mechanical ventilation system is to be provided. The extract system is to be sized to achieve 25 air changes per hour and is to consist of grilles, louver, inline axial extract fan and attenuators. Make up air is to be provided via either fully louvered doors or a ducted passive supply air system to atmosphere. The system is to operate 24/7 and is to be designed to maintain a negative pressure within the bin store at all times to prevent smells passing into adjoining rooms. An air fragrance/odour control system shall also be installed to prevent the smell dispersing. The fan shall be linked to the 'plant failure alarm panel'. The termination of the extract louver shall be considered so as to prevent the dispersion of smells in to other areas.

The Electrical Contractor shall allow to install a single switched socket outlet at high level for an insectocutor.

4.3.4.5 Smoke Control Systems

Smoke control systems shall be provided as required by the planning conditions and Building Control requirements and designed in accordance with Building Regulations, British Standards and established fire engineering principles. All systems are to be approved by Whitbread, Building Control and the local fire brigade.

Fire Fighting Cores

Should a firefighting core be required for the development, then the lobby for the firefighting lift is to be designed such that it has an external elevation to allow natural smoke ventilating via manually controlled vents. Should this not be achievable, then below is the preferred list of alternative solutions in order of their preference:-

1. Natural Smoke Ventilation Shaft
2. Pressure differential system for the stair and lobby
3. Mechanical Smoke Ventilation Shaft

The design of smoke shafts should be in accordance with the recommendations of a suitable technical standard.

Fire Engineered Solution for Means of Escape

All escape distances are to be designed in accordance with Building Regulations. In instances where this is not achievable and a fire engineered solution is required to compensate for, for example, extended travel distances, the principles of the scheme are to be agreed with Whitbread prior to exchange.

Use of a fire engineered solution should only be considered where it is impractical or not viable to include an additional staircase(s) to reduce travel distances to within code compliant limits. Where a fire engineered solution is required, sprinklers are the preferred solution to overcome extended escape distances. Any form of smoke control system to compensate for extended travel distances would need special consideration.

Notes: These measures can be considered where there are extended corridor travel distances up to 15m within dead end corridors (single direction of travel). Dead end corridors that are longer than this should be avoided; additional staircases should be utilised.
Isolated cases of extended travel distances may not justify such measures and alternative layouts may be necessary to overcome the impact on travel distance.
Small increases in the lengths of corridors (e.g. up to total of 12m within dead end corridors) are unlikely to warrant such measures.

The developer is to provide a fire engineering report to Whitbread for review, comment and approval prior to any works commencing. The report should set out the design objectives and performance criteria for the fire engineering solution and how it will be demonstrated that the performance criteria will be met. The requirements of the approving authorities in this respect should be established at an early stage. s.

4.3.4.6 Smoke Dampers

The Developer shall ensure that all ducted ventilation systems are installed with suitably fire rated smoke dampers that are operated by the fire alarm system to fully comply with the requirements of Part B of the Building Regulations. The developer shall also ensure that suitable/adequate access is provided to each damper for inspection and maintenance purposes. Where smoke dampers are installed, these are to be provided with and linked to a central monitoring control panel.

4.3.5 Drainage Systems

A suitable drainage system shall be designed for the hotel to adequately drain from all positions, with the drainage being free-flowing and disposal of waste water being quick and effective. Typically the guest bath/shower rooms will be collected vertically using 110mm diameter PVC pipework and joined at ground level into the below slab foul drainage network. Each guestroom is to have its own SVP. The drainage system will be vented to atmosphere at high level as appropriate. The developer shall ensure that noise from SVP or RWP shall not be heard from within the building especially at low level points (i.e. ceiling void above the restaurant and lower level bedrooms) where drainage pipe work is collected. Under these circumstances the Developer shall consider attenuation of the pipework. At all points of penetration through fire barriers (floors, walls etc.) the drainage system shall be fitted with suitably rated fire collars. At any point where a SVP makes a turn or has a connection above a bedrooms ceiling, the then the installation shall be carried out in cast iron. All drainage that is routed externally or within car park/ delivery areas is to be installed using cast iron or HDPE. Capped drainage provisions are to be installed in each linen room to an agreed position.

Trapped floor gullies with grating access cover will be provided as required to the plant rooms, service yard and internal bin stores and shall be connected to the foul drainage network. All floor gullies shall be suitably sized to maintain a constant unrestricted flow for the area.

No drainage is to be pumped.

The collection of hotel drainage shall within the restaurant shell demise should be avoided, if this cannot be avoided all pipework must be suitably insulated to avoid noise breakout and condensation, and routes and heights should be agreed with Whitbread prior to installation.

The hotel drainage system is not to have any shared connections with other tenants or third parties and it to be standalone.

4.3.6 Greywater Recycling

4.3.7 Not applicable Control Systems

The developer is to provide a BEMS (Building Energy Managements Systems) to monitor and command all major plant items HVAC plant, room air conditioning through interfacing with the Mitsubishi controllers, and any generation assets (CHP, GSHP, standby generators) as well as collecting all sub-meter data available, the following table provide an overview of the required connectivity:

Plant Item	Integration	Command Points	Monitoring Points	Set-point (Adjustable & Visibility)	Schedules (Adjustable & Visibility)	Other
Air Handling Units	Software/ Hardwired	Enable	Fault	Set-point	Time Schedules	
Lossnay Heat Recovery Units	Software/ Hardwired	Enable	Fault		Time Schedule Via AE200	
Mitsubishi AC System	Software/ Hardwired	Enable	Fault	Set-point	Time Schedule Via AE200	

Boilers	Hardwired	Enable	Fault, Boiler Flow / Return Temperature	Set-point		
DHW	Hardwired	Enable	Fault, Boiler Flow / Return Temperature	Set-point		
Fan Coil Units	Software/ Hardwired	Enable	Fault	Set-point	Time Schedule Via AE200	
Security Management System	Hardwired		System Set/ System Fault			
Door Heaters	Hardwired	Enable				
LV Sub Metering	Modbus		Consumption			
PV Sub Metering	Modbus		Production / Export			
Gas Sub Metering	Modbus		Consumption			
Water Sub Metering	Modbus		Consumption			
Heat Sub Metering	Modbus		Consumption			
CHP	Software/ Hardwired	Enable	Plant Run Status, Flow / Return Temperature			
GSHP	Software/ Hardwired	Enable	Plant Run Status, Flow / Return Temperature		Time Schedule	
Standby Plant Generation	Software/ Hardwired		Plant Run Status,			

The connectivity to the major plant items can be achieved by hard wired integration or by standard open communications protocol: Modbus or BACnet. These individual systems should be connected back to a single Tridium Jace 8000 controller. Which in turn must be connected back to our approved EMC support company: Matrix Control Solutions Ltd. Appropriate time should be allowed to connect the Tridium Jace over the Whitbread IT infrastructure such that the connected systems are visible remotely for handover.

All other ventilation systems shall be controlled locally via wall mounted controllers within the relevant room (or adjacent the relevant fan) or switched via the relevant lighting circuit. Front of house system controllers are to be located within the administration office or as agreed on site.

4.3.8 Cleaning of Equipment Prior to Practical Completion

The developer shall ensure that during construction any fan coil units, Lossnay units, air handling equipment, fans, heat exchangers etc. installed shall be suitably 'bagged' and sealed to prevent dust/debris from entering the units during construction which may cause malfunction or premature failure of the unit. Upon completion of the works at practical completion the developer shall 'de-bag' the units, clean them thoroughly remove the filters for cleaning and then reinstate the filter. The developer shall then return to site after 1 month from handover and remove, clean and re-instate the filters to all units.

4.3.9 Testing & Commissioning

The developer shall bring all the systems into correct operation by following the recommendations made in the CIBSE Commissioning Codes.

Refer to Whisdom and/or the BSRIA manuals for general and technical guidance on recommendations made in the codes.

Carry out the commissioning works employing suitably qualified and experienced personnel and specialists wherever necessary. Supply all test equipment required for commissioning and to demonstrate the correct operation of the installed systems. The testing and commissioning is to include for the revisits required to meet the seasonal commissioning requirements of BREEAM.

Allow for the provision of specialist commissioning expertise in respect of the following systems:

- Air & water balancing
- Controls: Refrigeration systems
- Controls: Air Handling Unit
- Ventilation System
- DHWS Gas Fired Hot Water Hatres
- Water Treatment
- CWS Systems & Boosters
- CHP Systems
- Above Ground Drainage Systems
- Gas Systems
- VRF Systems

Post Completion Proving Period for Mechanical and Electrical Systems

A programme for the whole of the works will be issued where there is a clear period of 10 working days post commissioning of all M&E systems, lifts and other plant prior to PC to run all systems to capacity. PC will not be issued until such a period has been identified and agreed to have been completed.

4.3.10 Seasonal Commissioning and Occupancy Variations

A. Seasonal commissioning pertains to testing under full load conditions during peak heating and peak cooling seasons, as well as part load conditions in the spring and autumn. Initial commissioning will be done as soon as contract work is completed regardless of season. Subsequent commissioning may be undertaken at any time thereafter to ascertain adequate performance during the different seasons. Whitbread's Representative will agree with the developer's team dates for seasonal setting and commissioning during the first 12months.

B. All equipment and systems will be tested and commissioned in a peak season to observe full load performance. Heating equipment will be tested during winter design extremes. Cooling equipment will be tested during summer design extremes, with a fully occupied building.

Interview building occupants to identify problems or concerns regarding the effectiveness of the systems.

NOTE – All Commissioning / Seasonal Commissioning & Post Occupancy Evaluation will be carried out in accordance with Building Regulations / CIBSE / BSRIA & BREEAM Guidelines.

Following modifications to the building services systems, re-commission is to take place and any revisions in operating procedures are to be recorded into the O&M manuals

An appropriate project team member(s) is appointed to monitor and programme pre-commissioning, commissioning and, where necessary, re-commissioning on behalf of the client.

4.3.11 Commissioning

Commissioning to be carried out in line with current Building Regulations and BSRIA1 and CIBSE2 guidelines, where applicable.

The main contractor accounts for the commissioning programme, responsibilities and criteria within the main programme of works.

A specialist commissioning manager is appointed for complex systems such as:- air conditioning, mechanical ventilation, Building Management Systems (BMS), Renewable energy sources, microbiological safety cabinets and fume cupboards and cold storage enclosures and refrigeration plant

A specialist commissioning manager is appointed during the design stage and their responsibility includes:- Design input, design reviews commissioning management input to construction programming, commissioning management input during installation stages, management of commissioning, performance testing and handover/post-handover stages.

The developer shall provide within the O&M manuals for the project an A4 laminated spread sheet detailing the periodic maintenance for all items of plant and equipment installed under the developers works.

The developer is to ensure that log books for the VRF systems are returned to Mitsubishi and transferred to Whitbread to ensure warranty guarantees are maintained.

4.3.12 Spares

The developer shall provide the following at hand over of the project complete with asset list and product information;

- 1 No Spare filter for all ventilation equipment all boxed and identified
- 10% spare filters for all bedroom bathroom extract systems boxed and identified
- 10% spare filters for all fan coil units and Lossnay units boxed and identified
- 1 No spare condensate pump for each model of unit (If installed by agreement)

4.4 ELECTRICAL INSTALLATION

4.4.1 Electrical Distribution & Switching

4.4.1.1 General

A perforated steel cable tray system shall be installed to form the main containment structure for all horizontal and vertical (where required) electrical, data, IT, telephones, TV and security cabling requirements. All installed cables are to be LSF. The tray-work shall be routed at high level and hidden from view through the public and back of house areas to the main electrical riser positions. Containment is to be within accessible suspended ceiling voids and service risers. Containment shall be provided for both the main power distribution and the distribution of SELV cables (IT, data, telecoms, security, etc.). The telecom and TV distribution system shall be provided by the Developer.

Sub main cables are to be of XPLE SWA/LSF type; clipped or zip-tied to the main containment tray-work infrastructure. Where cables installed within escape routes they are to be provided with a fire rated support system. Individual SWA main cables may be clipped directly to the building structure using purpose made SWA cleats. Consideration can be given to the use of rising busbar technology solutions. All sub main cables shall be clearly identified and labelled using proprietary cable markers as Low Smoke Zero Halogen Cable Labels at both ends indicating the cable circuit and reference. All individual cable cores shall also be labelled indicating circuit reference within all distribution boards.

The term 'clean supplies' relates to a dedicated power supply/circuit which shall be provided for the relevant areas from a suitable rated circuit breaker at the mains distribution board. All 'clean supply' circuits shall be clearly identified and labelled as detailed for sub main cables.

A complete earthing and bonding system shall be provided as required by BS 7671. The systems main disconnection bar shall comprise a copper bar on MEM limited type 10 BMD insulated supports. The location of the main disconnection bar shall be within the electrical switch room. The earthing installation shall comprise of all conductors, conduits, trunking, cross bonds and separate individual circuit protective conductors to form the complete system.

Provide surge protection on all main switchgears in accordance with BS 7671 and BS 62305.

Main equipotential bonding conductors shall be taken to all incoming gas and water service pipework, main HVAC plant, metal benches and metal sinks and associated ventilation ductwork, structural steelwork, pipework and the lightning protection network (the latter where installed). Supplementary bonding is to be provided to metal benches and metal sinks.

4.4.1.2 Bedroom Distribution

Each guest room is served by a dedicated 4 way SP&N RCD protected MCB board, located at high level within the guest room entrance lobby. The unit shall be as manufactured by Merlin Schneider and the developer shall state the specific Whitbread model reference PIBL4 when ordering through the Whitbread supply chain agreement. When quoting the reference number the consumer unit will be supplied with the MCB's as detailed below.

The bedroom MCB board will provide final sub-circuits to the bedroom and will nominally be categorised as follows:

1 no. 6A Type B MCB - Lighting circuit
1 no. 10A Type B MCB - Power supply for heating/cooling unit.
1 no. 16A Type B MCB - 1 no. radial circuit / Euro Socket etc
1 no. Blank - spare

The consumer unit shall contain a 40A – 30mA main switch. The consumer unit shall be complete with a cover.

Bedroom switches and sockets are to be as manufactured by Scolmore and as detailed on Whisdom

The following outlets are to be provided within each bedroom:-

- Behind TV – One double switched socket Click Scolmore Mode in white plastic
- Behind TV – One coaxial TV aerial point Click Scolmore Mode in white plastic
- Behind TV – One twin data socket point in white plastic
- Behind bed sideboard panel – One double switched socket Click Scolmore Mode in white plastic
- On bed sideboard panel – One double switched socket Click Scolmore Define Range in brushed stainless steel with black insert
- Adjacent bedroom window – One double switched socket and one Schuko euro socket Click Scolmore Define in brushed stainless steel with black insert
- Hair dryer panel – one single switched socket and one fused spur socket in brushed stainless steel with black insert
- Gas detection LED socket in brushed stainless steel
- Bedroom AC unit, at high level above door 1No. 13A FCU Click Scolmore Mode in white plastic

4.4.1.3 Front and Back of House General Small Power

Small power provision shall be as shown on the Whisdom drawings and as described in this specification. Within public areas including Cafe/Bar, public toilets, corridors, lift lobbies etc., all back of house areas including reception, offices, staff room (inc. shower and toilets) and corridors all cables shall be concealed and outlets and switch plates shall be flush mounted. Surface mounted steel conduit and surface mounted steel outlets and switches shall be acceptable in the freezer, chiller, dry store, beer store, comms room, and luggage store and boiler/plant rooms. All back boxes are to be metal.

The developer shall provide a floor box with suitable accommodation for the required number of sockets and data points as detailed on Whisdom for the information desk in the reception area. Conduit shall run beneath the floor slab for both power supplies and data ensuring that the required spacing is achieved.

All front of house small power circuits/outlets which are accessible by the public shall be protected by suitably rated RCD devices in accordance with the 17th Edition of the IEE Regulations.

All sockets in front of house areas to be Click Scolmore Define Range in brushed stainless steel with black insert as detailed on the Whisdom drawings.

All circuits for the sole use of PC's shall be deemed "clean Supplies".

The Developer shall refer to the 'Services Matrix – Hardware Requirements' (as available on Whisdom) and the agreement for lease drawings for the number of small power socket outlets and data points required for all back and front of house Whitbread equipment. As guidance the developer shall allow 1No DSSO per 2 covers within the Cafe/Bar and bar areas.

One linen room within the hotel is to have 1no. workstation, please see Whisdom for further details.

4.4.1.4 Corridors and Stairwell Small Power

Small power to corridor and associated areas shall be installed utilising LSF cabling concealed within corridor dry lining partition walls and/or ceiling structure/void. Circuitry for corridor general purpose power socket outlets is to emanate from the local distribution board on the corresponding floor.

All front of house small power circuits/outlets which are accessible by the public shall be protected by suitably rated RCD devices in accordance with the 17th Edition of the IEE Regulations.

4.4.1.5 Secondary electrical mains supply

If required by the fire strategy and/or requirements of building control, the developer shall provide a secondary electrical supply to serve life safety devices only in the event of a mains power failure. In these instances, where achievable, provide a secondary low voltage electrical supply from the DNO that complies with current regulations. However should this not be achievable, provide a stand-by diesel fuelled generator.
In the event of a mains failure, switching to the secondary essential supply is to be automatic via a changeover switch.

The generator set is to be complete with a mains auto control panel and is to have a minimum 7 hour duration integral fuel tank.

An exhaust system is to be provided with silencer and is to discharge to atmosphere.

The whole installation is to be carried out in strict accordance with the manufacturer's recommendations.

Where a diesel generator is provided, the unit is to be located at street level to allow ease of refuelling. A refuelling strategy is to be provided for approval by Whitbread. Any refuelling routes are to be via back of house areas.

4.4.2 Lighting

4.4.2.1 General

Provide lighting systems to achieve luminance levels in accordance with the addendum to CIBSE design Code for Lighting 2006, Lighting Guide 7 (internal), BS8026 Part 2 and the BRE Site Layout Guide.

Provide high frequency ballasts on all fluorescent and compact fluorescent lamps.
Adequately zone all public area lighting to facilitate separate control.
Provide lighting control for varying occupancy and/or uses within each space.

Reference should be made to Whisdom.

4.4.2.2 Ground Floor Areas

Back of House areas shall be switched via occupancy detection to each room. Emergency test facilities are to be located adjacent to the individual room light override switch.

The Cafe/Bar, bar and reception lighting shall be controlled as detailed below;

- Circuits for any area to be divided in to three;
  - Directional spotlights and downlights within screens to be switched on/off.
  - General circulation lights to be on a second circuit
  - Wall lights and pendants to be on a third circuit
- Circuits two and three above are to be dimmable but only on the basis of full on, half on and off.
- Number of circuits to be general required;
  - 3No for Cafe/Bar
  - 2No for reception

The number of fittings on any one circuit is to be determined by the developer during design stage and where it is considered more circuits are required for the number of light fittings the developer shall inform Whitbread in the first instance for approval. All front of house lighting is to consist of LED or compact fluorescent lamps.

For circuits to be dimmable, the developer shall provide a dedicated dimming and scene setting system. This shall comprise a MODE dimming system complete with MODE distribution board, a scene setter located at the café/bar lighting distribution point and

a last person in/out switch, located adjacent the designated point of entrance/exit. The system must be commissioned by the manufacturer. Emergency test facilities are to be located within the main distribution cupboard.

All light fittings shall be as detailed on Whisdom.

4.4.2.3 Bedrooms

4.4.2.3.1 The bedroom lighting installation shall be carried out in accordance with Whisdom

4.4.2.4 Staircases, Corridors and lift Lobbies

Generally, lighting applications to the above areas shall be installed utilising PVC/ PVC twin & earth type cabling routed at high level through corridor dry lining partition walls and/or ceiling structure.

LED Corridor lighting shall be switched/controlled by a combination of presence detectors and manual switching as follows;

- Circuit 1 – Illuminated 24/7 shall comprise 50% of corridor lighting and both maintained and non-maintained corridor emergency lights, which shall be manually switched from the multi gang switch plate located in the linen room to each corridor and shall remain illuminated at all times.
- Circuit 2 – shall comprise the remaining 50% of corridor lighting, which shall be switched via PIRs located throughout the length of each corridor. Each PIR shall be set to de-energise the lighting circuit 3 minutes after the last presence is detected.

The above control procedure shall be implemented for lift lobbies.

Emergency staircases shall employ presence detectors which upon activation will switch all lighting on within the staircase at the same time. Each PIR shall be set to de-energise the lighting circuit 3 minutes after the last presence is detected.

The main public staircase lighting is to be switched as energised on 24/7.

4.4.2.5 Back of House

LED Lighting to all back of house areas is to be via LSF twin & earth cabling concealed within corridor dry lining partition walls and/or ceiling structure or in certain areas surface mounted PVC conduits. Fittings shall be vapour resistant where deemed required and each area will require combined emergency fittings complete with battery backup. Light switches in plantrooms are to be provided with neon indication.

Lighting shall be switched via presence detectors and shall be set to de-energise 3 minutes after last presence is detected.

All linear luminaires and bulkheads shall be provided complete with LED lamp fittings as detailed on Whisdom.

4.4.2.6 External Lighting (Access Walkways and Plant Areas, Car Park and Building)

4.4.2.6.1 Car Park & Footpath Lighting

LED External lighting will be installed to the car park and external footpaths and shall be controlled by a time switch and photocell. Minimum and average Lux levels shall be taken from CIBSE Guidelines but generally the average lighting level shall be no lower than 10Lux.

It shall be the developer's responsibility for ensuring that there are no local restrictions with the planners or local specific conditions such as airports, expressways and residents, regarding the type and specification of the light fittings required. Therefore the developer shall ensure the light fittings specified are acceptable to the planners, prior to the ordering and installation.

The developer shall provide a lighting scheme for the external footpath lighting for approval by Whitbread.

Ensure the design of all external lighting in the construction zone including illuminated signage, is in accordance with CIBSE Lighting Guide 6 – The Outdoor Environment (1992).
Access Walkways and Plant Areas

4.4.2.6.2 Access Walkways & Plant Areas

The Developer shall design, supply and install external LED lighting to all external plant access routes and plant areas to achieve the required LUX levels during the hours of darkness.

The lighting to these areas shall be switched from the internal side of the access door on to the external areas. The lighting to the plant decks shall provide sufficient lighting levels to carry out routine inspection of plant and equipment.

The Developer shall also provide adequate emergency lighting to achieve the required LUX levels in the event of power loss. These fittings are to be non-maintained unless otherwise advised by Building Control.

The Developer shall be responsible for ensuring that there are no local restrictions with the planners or other specific conditions as detailed under the section Car Park & Footpath Lighting.

4.4.2.6.3 Building/Façade Lighting

The cabling, containment, distribution boards, LED light fittings and all associated equipment including drivers, photocell, connectors and time switch etc. for the façade lighting will be supplied and installed by the developer all in accordance with the agreement for lease drawings and specialist contractor's drawings.

The fittings shall be as manufactured by Alpha LED - Bolton from their RBL 36 range of LED products. The specific model reference will be detailed on the Whitbread Specialist Contractors drawings for the development. The developer shall supply and install the complete lighting system in accordance with the lighting manufacturer's recommendations. The drivers and associated equipment shall be located internally within ceiling voids and shall be complete with suitable access hatches for future maintenance.

The dedicated power supply for the lighting shall be complete with photocell and time switch and shall be run within the ceiling voids and shall be complete with power outlets for each driver unit.

Generally cabling and containment shall be designed so as to be installed within the building fabric.

ARCHITECTURAL LIGHTING SPECIFICATION

Building illumination is via IP67 externally rated LED projector modules.
Modules are available in two beam angles:

a) Pinstripe
Is a narrow, focused 5 degree beam for spotlighting or grazing up or down a wall in a more controlled, further reaching stripe;

b) Conical
Is a wide 60 degree beam useful for lighting a large area grazing up or down a wall with a broad spread of light?

The LED modules have been developed with a bespoke fixed colour output for hub by Premier Inn applications (no green) with a maximum light output of 36W per unit. Modules are run via a driver unit powered from 230VAC input supply; output is 14V maximum per

channel, connection to driver via RJ45 data cables. The driver should be installed internally within accessible hatch etc. to aid maintenance.

4.4.3 Fire Detection System

The Fire Detection System shall be a Protec, microprocessor based, multi loop analogue addressable system design to give an L1 classification fully programmable from the panel.

The fire alarm control and indication panel shall be provided within the ground floor entrance lobby or reception area or as agreed with the Fire Officer/Building Control. The system shall comprise manual and automatic detection devices together with electronic sounders wired on separate circuits. Combined smoke/heat detectors with integral sounder units shall be provided throughout the public areas including guest bedrooms, with suitable detectors located in areas such as plant rooms in accordance with the requirements of BS 5839. Considerations should be given to ensure that all voids over 800mm are provided with automatic fire detection. All public areas (including bedroom corridors, lift lobbies, stair lobbies, all UA bedrooms and 10% of remaining bedrooms and their bathrooms) and back of house areas shall be installed with xenon beacons in accordance with BS 5839 and EN54 pt. 23. All smoke dampers that have been installed into the ventilation systems to comply with the requirements of Part B of the Building Regulations shall be linked into the fire alarm system.

The complete installation shall comply with BS 5839 Part 1. All equipment shall be as manufactured by Protec. The control and indication panel shall incorporate LED indication and liquid crystal display together with a buzzer for fire and fault warning. The panel shall also be complete with a printer, back-up battery and charger system. The battery and charger system shall be provided in accordance with BS 5839 Part 1 2002.

Cause & Effect Matrix – To Be Agreed With Building Control

CAUSE & EFFECT MATRIX													
Description	3 Min Delay / Warning Alarm AT FA Panel	Activate ALL Sounders ' Evacuate'	Interface - Gas Valves / Control Panel - Shutdown On Alarm	Interface - Main Entry Doors - Open On Alarm	Interface - Lifts Return To GF	Vibrating Pillow / Disabled Alarm activated	Interface - Music Shutdown On Alarm	Interface - Lift Fire Shutter (3 Mijn Delay (where applicable)	Interface - Corridor Doors Held Open - Close On Alarm	Interface - AOV / Smoke Vent / Smoke Dampers Activate (If Applicable)	Interface - CST Pager	Interface - Signal to 3rd Party Fire Alarm (If Applicable)	Mitsubishi AE 200 – Shutdown On Alarm
Activation of Callpoint – All Areas		X	X	X	X	X	X	X	X	X	X	X	X
Activation of 1st Stage Detection – All Areas (Hotel & Restaurant)	X												
Activation of 2nd Stage Detection – All Areas Or After 3 Min Delay		X	X	X	X	X	X	X	X	X	X	X	X

The Contractor shall be responsible for verification of requirements of type, size, location and installation of Fire Alarm interfaces, for all emergency shut down under Fire Alarm activation. These will include, but not be restricted :-

FIRE ALARM INTERFACES
- Gas Valve Close (Main Plant Room)
- Lift
- Main Entrance Doors
- Music Rack
- All Doors Held Open / Closed
- Ansul Fire Suppression
- CST Pager
- Kitchen Supply & Extract Ventilation Plant

etc.

The 3 minute delay is the hub by Premier inn preferred standard operation for the fire alarm panel but ultimately the operation of the fire alarm must comply with Building Regulations and the Fire Strategy. Where the above does not comply with Building Regulations or the Fire Strategy for the site the developer shall inform hub by Premier Inn.

Allow to programme the panel and/or provide a manual override key switch to prevent the shutting down of plant and override of lifts during testing periods. Where any interfaces are to be provided with third parties or other tenants, the operation of these are to be agreed with hub by Premier Inn.

An electro-hydraulic hold open device is to be provided to each fire door within the bedroom corridor areas which are required to be held open until fire alarm activation. The hold open devices are to be an overhead door closer with electro-hydraulic hold open with slow closing force mechanism. The developer shall ensure that the wiring and mechanism itself is embedded in to the door frame and shall not be visible. In some instances fire doors to staircases may require a fire alarm interface to deactivate the door locking system on fire alarm activation. Each door will require a power supply and fire alarm interface unit located within the corridor ceiling void. The system shall be installed using PVC/PVC cabling, generally routed through the bedroom corridor cable bulkheads and dry line partitions. Operation of the system shall be via relay units located within the electrical intake position of each bedroom floor and shall be activated on operation of the building fire detection system.

On emergency escape doors with fire alarm interfaced automatic door release systems the developer shall provide a manual door release unit to be positioned by the door on the approach side in accordance with AD B of the Building Regulations.

Where the fire alarm panel or repeater panel is remote to the reception area the Developer shall provide a repeater panel with the same functions as the main panel, within the reception area.

The contractor shall ensure that Protec are employed to commission and demonstrate the system to the end user.

4.4.4 Disabled Refuge

A separate stand-alone dedicated disabled refuge communication system is to be provided to link each disabled refuge area to a central panel, located within the meet & greet comms tower. At each refuge position there is to be a 2-way radio speaker which, duringto provide direct voice contact to the central panel located at the reception desk. The refuge communication system cabling shall be fire rated throughout its length. The fire protection may be either steel conduit and/or specific fire rated cable. A Protec system shall be installed or similar and approved.

NOTE – The Disabled Refuge will be active at all times and not just under a fire situation, the contractor shall also take into account the location of sounders to ensure that all speech is still audible in a fire situation

From both the disabled alarm panel and the disabled refuge panel, provide cables back to pager system within the office, coiled up for termination by the pager system installer.

4.4.5 Emergency Lighting

Emergency lighting will be designed and installed in accordance with BS5266: Part 1, BSEN 1838 and draft European requirements. The emergency lighting system shall comprise a mixture of self-contained, non- maintained and maintained luminaires with integrated battery packs and inverter units.

All emergency luminaires shall have a standby operation of 3 hours, with their associated charger units able to suitably recharge within 24 hours. Testing facilities shall be key switches located adjacent to local distribution boards for tests to large areas such as Main Reception, bedroom corridors and staircases. For tests to isolated areas such as offices, linen rooms and WCs test facilities shall be installed within the local lighting switch plate

Provision shall be made to provide all final exits, corridor fire doors & direction changes to fire exit routes with illuminated directional exit signage.

Emergency lighting shall be designed to a minimum of one Lux on all escape routes with 10% of the general illumination level over all distribution boards, switchboards and plant items.

4.4.6 Guestroom Controls

Provide, install and commission each guestroom with a dedicated room control unit, headboard control panel and illuminated room number as and supplied by Whitbread's nominated supplier. The complete control system is to include the following features:

- LCD temperature display
- AC switching on/off/auto
- AC temperature sensor
- AC temperature adjustment
- AC fan speed control
- Scene setting lighting control
- Do not disturb (DND) button
- Do not make up room sign
- Integrated doorbell sounder

The guestroom control unit is to provide mobile interface and control of the bedroom lighting, AC and smart TV.

The guestroom control package is to include a back lit plexi glass headboard control panel and an illuminated room number with integrated door bell, DND and do not make up room signs.

Whitbread's nominated supplier is:

VDA
Unit 5 Dwight Road
Watford
WD18 9DA

Tel: 01923 210 678
www.vdavda.com

4.4.7 Data System

A complete data cabling infrastructure is to be designed and installed utilising Cat5E cabling and shall be tested upon completion. The installation shall comprise all cable infrastructures, outlet back boxes and face plates and their termination. The cable shall be zip tied to the cable tray network throughout the building, maintaining the required separation distances from other cables.

6 no. Cat5E cables shall be provided to each guestroom as outlined below and routed to the hotel main comms room or intermediate comms room.

2 no. Cat5E cables underneath the bed (within standard guestrooms) or in the bedhead wall (within UA and larger rooms)
2 no. Cat5E cables behind the TV
2 no. Cat5E cables in the corridor ceiling void above the guestroom door for future provision of femtocells (mobile signal boosting equipment)

Provision must be made for 60 no. ancillary lines for services to the Office, reception foyer & kiosks, Cafe/Bar and Administration areas. The cables terminating in the comms room shall be carefully labelled and a complete telephone point assignment schedules shall be produced to accurately detail all cables and their termination points.

The contractor is to ensure that all cables, patch panels, outlets, modules and system components are CAT5E rated from one of the following approved manufacturers, in order of preference to ensure Whitbread receive a 25 year system warranty on structured cabling:

Mayflex Excel
Assynia EVO
Hellermen Tyton

In addition to the above, provide a dedicated phone line for the hotels red care facility, each lift and for each main utility meter AMR (e.g. water, gas and electricity utility meters). If phone lines are required for other systems such as CHPs these are to be provided by the developer and do not form part of the Whitbread telephone order.

The developer shall be responsible for the complete telecommunications installation and shall employ the services of the Whitbread Specialist contractor (or other Whitbread approved specialist contractor) for all telephone and Wi-Fi installations. This shall include all wiring from the comms room location to all points of use within all areas. The specialist contractor is;

Celestra Limited
23 First Avenue
Bletchley
Milton Keynes
MK1 1DW

Tel; 01908 889 500
www.celestra.co.uk

The developer shall also design, supply and install the complete cable tray work infrastructure for the telecommunication installation.

At the data cabinet located within the comms room the provision of 2No double sockets will be required by the developer. Depending on distances between outlets and cabinet there may be a requirement for interim

4.4.8 Wi-Fi

The hotel will have a Wi-Fi system installed. The Developer shall design and install the cable tray work throughout the building which shall be approved by the hub by Premier Inn Specialist Contractor. The Developer shall also allow for the provision of 2No double

socket outlets within the comms room for the Hub/Switch. Generally there is a requirement for one access point to eight rooms within the corridor ceiling. Power supplies to comms room shall be deemed "Clean Supplies". The small power outlets to the internet desks shall also be deemed "clean supplies".

The hub by Premier Inn Specialist contractor (Arqiva) shall provide and install the cable infrastructure and all equipment.

4.4.9 Till Supplies

Power supplies to tills shall be deemed "Clean Supplies". The number of till supplies shall be as indicated on the 'Services Matrix – Hardware Requirements', on Whisdom.

All electrical supplies to tills shall be installed by the electrical contractor.

4.4.10 ATM Supplies

Power supplies to each ATM shall be deemed "Clean Supplies". The number of ATM supplies shall be as indicated on the 'Services Matrix – Hardware Requirements', on Whisdom.

The developer shall note that the ATM machine requires a dedicated direct phone line. The developer shall provide the dedicated direct phone line from the ATM machine to terminate at the BT DP in the comms room and shall be suitably, clearly labelled with sufficient spare length for final connection to the DP by others.

4.4.11 TV System

All TV system cabling and cable tray network will be installed by the Developer in the form of coaxial cabling to all rooms specified on Whisdom, this to the hub by Premier Inn specialist contractor design.

Within each bedroom the contractor shall provide a single gang metal skeleton backbox for the HDMI lead link from the desk to the TV

In addition where desks are offset from the Bedroom TV tower then the contractor shall allow for installation of a free issue HDMI Lead (Measured by the contractor) between the HDMI position on the desk and to behind the TV
Connection to the head end unit will be carried out by the hub by Premier Inn specialist contractor

A complete DTT infrastructure shall be provided consisting of WF165 and WF100 coaxial cables as appropriate, which will emanate from service riser or appropriate position on each floor star wired to each individual TV position.

The coaxial cable will be connected via multi taps and splitters, through a main backbone to the head end distribution amplifier or amplifiers, at the head end location 2 x 13amp sockets plus clean earth are to be installed by the on-site electricians. Coaxial shielded outlets will be installed at all points by the hub by Premier Inn specialist contractor.

If a sky receiver is required as part of the installation all works with the exception of the first fix cabling will be carried out by the specialist contractor

The developer will be responsible for the complete television system installation and shall employ the services of the hub by Premier Inn Specialist Contractor as shown below.

SCCI ALPHATRACK
PIPER HOUSE
WEST RD
14 WEST PLACE
HARLOW
ESSEX
CM20 2GY

4.4.12 Distress Alarm Systems

A complete C-Tec disabled distress alarm system is to be installed providing coverage to each Universal Accessible (UA) bedroom and each public accessible toilet. Each UA bedroom is to be provided with 1 no. call point located on the bedroom headboard, this to be complete with plug in extension cord.

Within each UA bedroom shower room, 1 no. pull-cord shall be provided facilitating the WC and shower tray, and between the W/C and Bath in the bathrooms (all in accordance with Doc M of the Building Regulations). A reset panel complete with point for a tail call lead shall be provided within the bedroom next to the bed (window side). In the main corridors, above each UA bedroom entrance door a distress indication light will be situated on the wall.

To each public UA toilet a pull cord type call point complete with reset button and indicator light is to be provided.

The distress alarm control panel is to be fully addressable and will be situated at a specified position within the main back office. This is to control a remote visual display panel, which is to be located at the meet & greet comms tower in reception. From the above control panel, multi-core ELV security type cabling is to be routed utilising the cable tray network to service all above call point applications. The indicator panels shall be recessed and shall be complete with the required number of indicators with no more than 2Nr spare indicators.

4.4.13 Paging System

An electrical supply for the paging system will be terminated with a Fuse Spur unit at an agreed position within the office.

4.4.14 Car Park Barrier

The car park barrier system shall be provided and installed by the developer at the entry and exit to the car park. This system shall be a fully open protocol and comprise of separate entry and exit full width barriers to allow free entry and controlled exit. An automated and illuminated “CAR PARK FULL” sign is to be provided adjacent to the entrance barrier. On the exit barrier, the developer shall provide a post mounted intercom and CCTV camera for contact and monitoring at reception. The exit barrier shall incorporate the function to enter a key code for guests that will open the barrier and/or a swipe card function operated via the guest’s key card which will validate car park payment of the guest.

Both the entry and exit barriers are to be selected to allow adequate access for delivery vans and Lorries.

The developer is to undertake a crime risk assessment for the site for review by Whitbread. In areas where Whitbread considered there to be at risk from vandalism or high crime rate the developer shall consider the installation of a barrier gate system in lieu of car park barriers which are to operate as above. The barriers shall be provided with manual override controls at the meet & greet comms tower and admin office. The developer shall confirm the car park barrier supplier with Whitbread.

In the case of a single entrance and exit barrier the operation is to be agreed by Whitbread. The car park barriers are to be provided with reflectors to make them easily identifiable.

SCCI ALPHATRACK
PIPER HOUSE
WEST RD
14 WEST PLACE
HARLOW
ESSEX
CM20 2GY

4.4.15 CCTV and Door Entry System

An electrical supply for the CCTV system will be terminated to a number of small power outlets as required by the specialist contractor and shall ensure that all cameras are fed from the same phase. All cabling shall be routed internally on containment provided by the electrical contractor.

The Developer shall refer to the 'Services Matrix – Hardware Requirements' (as available on Whisdom) for the number of small power socket outlets and data points required for the CCTV systems

A door entry system including two way intercom complete with push button and a weatherproof swipe magnetic card unit for the hotel main entrance doors and back of house delivery entrance is to be provided by the electrical contractor.

It is envisaged that during daytime hours the front doors are to automatically open. During night time hours, the outer doors will remain automatically openable but the inner doors will only be openable from the swipe card system or by remote release of the electro mechanical door lock from the Meet & Greet Podium.

An internal green break glass unit to release the doors in an emergency is to be fitted adjacent each set of doors.

Conceal all wiring to the system in ceiling voids on cable basket system and flush in walls within high impact PVC conduits terminating in accessory boxes. Provide the door entry system with a 13amp dedicated power supply and meet "fail safe" requirements of the Local Building Control Officer, and/or District Surveyor in relation to means of escape from public areas.

4.4.16 Staff Security System

The staff security system should automatically, when activated, dial a security company who shall advise the police. Activation is generally by under counter buttons located at the Reception Meet and Greet Desk. The complete system will be installed by the developer. An electrical supply dedicated to the security system will be terminated to a Fuse Spur unit at a position as detailed on Whisdom.

4.4.17 Smoke Ventilation

Smoke ventilation shall be provided as required by the planning conditions and Building Control requirements in accordance with Building Regulations. All required power supplies and fire alarm interfaces shall be provided by the developer.

4.4.18 Smoke Dampers

All fire alarm operated smoke dampers as installed to the ventilation systems are to be provided with a suitable power supply and fire alarm interface in order to energise the dampers actuator and close the damper on fire alarm activation. The operation must be in accordance to the requirements of Part B of the Building Regulations. The smoke dampers will require separate key test facilities to allow separate testing and to avoid operation during the fire alarm testing.

4.4.19 HVAC Equipment

Sub-main distribution power supply cabling shall be provided to all main mechanical H.V.A.C. plant and terminate at suitably rated equipment isolation devices.

4.4.20 **Catering Kitchen**

The catering kitchen shall be as per the details on Whisdom or if available the Specialist Contractors drawings. A suitably sized and rated 400-Volt, TP&N distribution board to suit the proposed kitchen layout and appliances shall be provided and installed generally within the kitchen itself.

A TP&N, 400Volt XLPE/SWA supply cable from the Main Distribution Board to the new catering kitchen distribution board position is to be installed. The kitchen distribution must be located within the kitchen.

The number of sockets shall be in accordance with Whisdom or if available the Specialist Contractors drawings. Generally Isolators for kitchen appliances shall be DP or TPN dependent upon rating of the appliance. Normally the isolator shall be mounted at 1500mm above floor level over a work top to allow free access to the switch, with a flexible cable outlet point fitted at 300mm above floor level behind the appliance, or alternatively the isolators can be adjacent to the kitchen distribution panel.
Where the Catering Equipment Company has indicated a low level switched socket to control fridges and freezers, a switched fused connection unit shall be provided at 1200mm above floor level in a location which is freely accessible for each fridge or freezer, and these shall control an unswitched 13A socket outlet at 300mm above floor level directly behind each appliance.
Switched fused connection units shall be installed at 2000mm above floor level for fly killers /insect-o-cutors.

The lock/stop emergency buttons shall be fitted with Protective caps to prevent accidental activation. Ensure that the emergency knock-off button, when activated, does not turn off the power to essential equipment such as the walk in fridge and freezers.

4.4.21 Sound System

The sound system shall be installed by hub by Premier Inns Specialist Contractor. All small power and containment requirements are to be confirmed by the Specialist Contractor but generally 2No twin sockets located adjacent the sound system shall be provided. The developer shall refer to Whisdom.

4.4.22 External and Internal signage (incl. Remote signage)

The developer's contractor shall install the cable, cable tray work and the controls associated. The building signage lighting shall be controlled via a separate suitably rated time switch with a master override switch located in the manager's office, fed via a dedicated lighting contactor. All signage shall remain ON during the night hours.

The wiring shall be terminated to within 0.5m of each lighting position as detailed on the signage drawings.

Wiring shall be carried out using XLPE/SWA/PVC cable installed within the roof void and mounted on cable tray and within the perimeter stud work walls; each cable shall be terminated within a back entry BESA box, complete with dome lid and gasket. Where remote signage is detailed; cables shall be drawn through adequately sized below ground ducts from the building to the location of the remote signage all as detailed on the Specialist Contractors drawings.

Internal illuminated signage (e.g. back lit menu boxes) is to be provided as detailed on the specialist contractors drawings and is to be operated on a separate lighting circuit. Allow to provide all necessary power supplies to the signs ensuring cabling is concealed within walls and sockets/fused spurs hidden within ceiling voids or back of house areas.
Remote Signage

These are primarily located around the demise perimeter and are either lollipops, totems or entrance structures. Suitable foundations (to suit site specific conditions) and power feeds are required.

<u>Signage Illumination</u>
The standard is internal illumination in the first instance, although external illumination is occasionally required to meet specific planning (advertising consent) requirements.
Illumination is via LED spaced to give even illumination. A 240V AC power feed is required for each sign location. Start-up current loadings will vary depending upon size of signage but a 13A supply will cover most occurrences - actual loadings TBC for each site. For high

level, inaccessible locations double lamping on separate circuits or white LEDs are used. Each site is unique and will be determined accordingly.

Control of signage illumination is via timers as they are more reliable, whilst solar cells are fool proof and won't need attention (change with seasons etc.). Solution is to use both with mains supply into a timer (in reception/back of house area), then into a solar cell so that signs only come on in the timed period once light levels fall.

4.4.23 Service Yard Door Intercom

The service and deliveries entrance shall be provided with a door intercom system which shall be linked back to the admin office/meet & greet comms tower. The intercom shall allow two way communications and be complete with initial sounder/bell to alert staff. The system shall also be interfaced into the pager system.

4.4.24 Electrical Supplies to White Goods

Electrical supplies shall be provided to the following equipment;
Washing machine; A recessed 13A twin socket located locally to the unit Tumble Dryer; A recessed 13A twin socket located locally to the unit Dishwasher; A recessed 13A twin socket located locally to the unit Glass Wash; The model of glass wash is detailed on Whisdom. Allowance should be made for 2No single phase double pole isolators.
Ice Maker; A recessed 13A twin socket located locally to the unit
Ensure that all sockets are located behind the equipment to allow easy installation.

4.4.25 Over Door Heater

Provide a 6 KW (Min) recessed electric over door air curtain located in-front of the internal set of doors within the entrance lobby. Size the unit to overcome the heat losses within the space and control via a return air sensor. Provide a control panel for the unit located on the Comms tower in the entrance lobby with auto/low/high/off speed and temperature control.

4.4.26 Testing & Commissioning

Demonstrate to the satisfaction of hub by Premier Inn that the installed systems are in accordance with the IEE Regulations and that the installation meets with the requirements of the Specification and any variation subsequently instructed.

Allow for the provision of specialist commissioning expertise in respect of all sub systems and specifically the following:

- Fire Alarm
- Lightning Protection
- Emergency Lighting
- CCTV Installation
- Voice & Data System
- Intruder Detection System
- TV Array
- Disabled Refuge System
- TV, Data and Telephone cabling

Make allowances for disconnection or similar operations to satisfy the requirements for testing etc. and the subsequent re-instatement of the supply.

All accessories, equipment, control circuits, systems, RCDs etc. shall be checked and demonstrated for proper functioning. This includes fixed equipment supplied by others but wired under this contract. RCD operational clearing times shall also be verified.
Provide circuit identity of the protective device, including neutrals and ensure labelling is complete.

Test the insulation resistance at 500V DC for all final circuits and 1000V for all other circuits. Phase to phase; phase to neutral; phase to earth. Electronic components shall be disconnected prior to tests. Ensure any circuits liable to damage from such tests are identified and adequately protected to prevent damage.

Carry out an extra low impedance continuity test to ensure a safe measure of earth bonding before the earth fault loop impedance tests are made.

Test the earth fault loop impedance and prospective fault current (IP) on each socket outlet, fused connector, fixed appliance, luminaires, switch and fuse gear and exposed metalwork bonded to earth. Tests to be phase/earth for all installations. Where RCDs are connected to circuits these shall be disconnected prior to the tests

Test the insulation of non-conducting walls and floors (where appropriate).
Allow for specialist commissioning and demonstration for the fire alarm system.

Provide copies of commissioning information including 5 year test requirement and a copy of the building log-book to Building Control.

The developer shall provide within the O&M manuals for the project an A4 laminated spread sheet detailing the periodic maintenance for all items of plant and equipment installed under the developers works.

4.4.27 Spares

The developer shall provide the following at hand over of the project complete with asset list and product information

Spare lamps / Fittings

- Provide 10% of all fittings (Where Integral Lamp)
- Provide 10 % lamps (Where Not Integral)
- 1 no laminated lamp schedule, indicating all installed fittings, both front and back of house and the corresponding lamp required (plus 1 No. copy within in each manual).

Fire Alarm

- 4 no spare break glasses.
- 1 no laminated zone chart (plus 1 No. in each manual).
- 1 no laminated instructions sheet (plus 1 No. in each manual).
- Sets of all test keys and panel keys.

Distribution Boards

- 1 No. Laminated circuit chart for each distribution and sub distribution board.
- Sets of all keys.

Emergency Lighting Fittings

- Sets of all test keys.
- Sets of fixing keys.

Energy Saving Switch

- 10% spare ESU 2300
- 10% spare Activation Cards (suitable for actuating the ESU 2300)

4.4.28 Mobile Phone Network Coverage

Provide mobile phone network coverage signal enhancement as required based on modelling and testing of signal strength at first fix. Allow to employ the services of the Whitbread Specialist contractor (or other Whitbread approved specialist contractor) to install a signal boosting system capable of covering all 3g and 4g phone networks and operators to provide a good level of reception throughout the hotel.

4.4.29 **Electric Vehicle Charging (EVC)**

Where required by planning EVC points will be provided, these will be supplied and commissioned by the preferred specialist Chargemaster Plc, Mulberry House, 750 Capability Green, Luton LU1 3LU. www.chargemasterplc.com

APPENDICES

APPENDIX A – HUB BY PREMIER INN STANDARD DELIVERY SCEHDULE

VEHICLE DETAILS				
VEHICLE TYPE	**LENGTH**	**WIDTH**	**HEIGHT**	**COMMENT**
Large articulated	16.5m	2.65m	4.2m	1st choice
Small articulated	14.6m	2.65m	4.2m	2nd choice
Rigid lorry, 26t & bin lorry	12.00m	2.65m	4.0m	3rd choice
Refuse Vehicle				

DELIVERIES					
TYPE	**No VISITS**	**DURATION**	**TIMINGS**	**VEHICLE TYPE**	**ACTIVITY**
Linen	7	30 mins	06.30 – 18.00	26t	6 x 1.5 m3 cages on wheels
Food	3	40 mins	06.30 – 18.00	Large Artic	1 x trolley with 1m x 1.2m pallet
Beer/wine	1	45 mins	06.30 – 18.00	Large Artic	1 x trolley with 1m x 1.2m pallet
Refuse	4	20 mins	06.30 – 18.00	26t	4 bins emptied per visit average
Note: no deliveries on Sundays/Bank holidays					
Width includes vehicle body width only, not including wing mirrors - allow additional 80cm for the 18t and 26t, so 3.45m wide for the rigid, PLUS a reasonable gap for manoeuvring the vehicle, 4.0m will allow for that, albeit not much room for error					

DELIVERY CONDITIONS
▪ All corner radii to be a minimum of 6m ▪ Vehicle loading bay to be virtually flat ▪ Surface of delivery route from the vehicle to be smooth and level ▪ Loaded pallets (1m x 1.2m) are pulled to the F&B areas ▪ Slopes at delivery points - the maximum load for men is 250N, anything more than a 1 in 16 slope (3.6 degrees) would be too much weight for them to push up a slope. This is then reduced to 1 in 25 or 1.3 degrees for females

WHITBREAD DELIVERY AND SERVICING CHECKLIST (Next Page)

APPENDIX B - HUB BY PREMIER INN & RESTAURANT DEVELOPMENTS: DELIVERY AND SERVICING CHECKLIST

SITE DETAILS

Site Address:

Site Type:

Solus Premier Inn	☐	Conversion	☐	New Build	☐
hub by Premier Inn	☐	Conversion	☐	New Build	☐
Small format Premier Inn	☐	Conversion	☐	New Build	☐
Restaurant Premier Inn	☐	TableTable	☐	Brewers Fayre	☐
Beefeater ☐					
Extension	☐	No. of additional rooms (if applicable):			

Number of Rooms: **Number of Restaurant Covers:**

Development Type:

Self-Build ☐ **Project Manager:**

Developer Turnkey ☐ **Developer Details:**

DELIVERY DETAILS

How will deliveries be undertaken?

On site ☐ Will the vehicle enter/exit in a forward gear? Yes ☐ No ☐

On street ☐ Amendments required to on street restrictions? Yes ☐ No ☐

Has tracking been undertaken?

Yes ☐ By who: Drawing Nos.

No ☐

Is a dry run required? Yes ☐ No ☐

Are there any delivery restrictions (e.g. timings, weight, height or environmental), if so, provide details:

Maximum Vehicle Size to be Used:

16.5m Large Articulated ☐

14.6m Small Articulated ☐

12m Rigid (26t)* ☐

EXTERNAL Delivery route description (between the vehicle and goods entrance), provide details:

***Minimum required for waste/recycling collections**

Restricted delivery/PAR Cost (£):

INTERNAL Delivery route description (e.g. between the bin store and refuse collection point), provide details:

Waste / Recycling Storage Provision

General Waste		x 1100 litre bins
Mixed Recycling		x 1100 litre bins
Food Waste		x 240 litre bins
Glass		x 240 litre bins

COMPLETED BY:	**DATE:**	**APPROVED BY:**