Rebbeck Dunn Watters

TECHNICAL DUE DILIGENCE REPORT

213-221 TUAM STREET
CHRISTCHURCH

for

PMG Direct Office
Fund

Date:
24 January
2020

Rebbeck Dunn Watters

Contents

Client Brief

This report has been prepared on behalf of PMG Direct Office Fund.

This report provides an overview of the construction and condition of the building fabric and associated external areas. Specialist mechanical and electrical reports relating to the services of the building have been referenced where appropriate and appended to this report.

Survey Details

Date of Survey:	23 December 2019 and 14 January 2020
Weather:	Cloudy and dry
Building Surveyor:	David Robinson BSc (Hons) MRICS

Survey Methodology

The survey was undertaken using visual aids only. Most elements were inspected from ground level. Access was gained to the roof although roof voids, service ducts/chambers were not inspected unless specifically detailed in the main body of the report.

Photographs were taken during the survey using a digital camera, a sample of these are included within the appendices. Upon request additional photographs can be provided on a USB stick.

Defects and shortcomings with the building envelope are detailed within this report wherever noted during our inspection. It is not possible, however, to guarantee that all areas of water penetration have been identified due to possible leaks from obscured detailing, hidden pipework, blocked drains which are not readily evident during the survey.

The report has been compiled on an element-by-element basis, describing its construction and condition.

Definitions

The following is a definition of the comments as to the condition of the elements surveyed:

Good:

Items which have suffered minimal weathering, wear or decay and should remain in such condition for at least another five years if maintained according to good practice and as per the manufacturer's recommendations where applicable.

Fair/ Reasonable:

Items that have worn through "normal" use and weathering, and are in commensurate condition to the building age and use. Ongoing maintenance is required to prevent premature deterioration from occurring.

Poor:

Items that are worn, decayed or weathered either due to their age, abnormal use or lack of maintenance. Accelerated deterioration will occur unless remedial works are undertaken as advised in the body of the report.

Recommendations in regard to suggested repairs are beyond the scope of this report.

Standard Reporting Conditions

This report is based on a visual inspection and covers the building fabric only and does not cover any temporary fixtures, fittings or chattels on or at the property.

For the avoidance of any doubt, this report is not a structural or geotechnical survey and does not cover the inspection or testing of any services. All comments made by Rebbeck Dunn Watters Limited relating to the structure or services are a guide only and should not be taken as verification that they conform with current regulations. All recommendations should be verified by a suitably qualified engineer prior to any repairs proceeding.

No intrusive or destructive investigation has been undertaken and as such we have not inspected woodwork or other parts of the structure or services that are covered, unexposed or inaccessible. We are therefore unable to report that any such part of the structure is free from defect or deleterious materials.

Signs of water ingress were searched for during our survey. However, this report cannot warrant that the building is free from water penetration from defective roofing, cladding, rainwater goods, rising damp or the like unless evident at the time of our visual inspection.

Where recommendations are provided these are for the most appropriate repair in view of the building continuing to be occupied and used for its current purpose. Any recommendations are not intended to be a specification or design and therefore we cannot be held liable for any repairs/maintenance implemented either by ourselves or any other third party without full design first being undertaken.

This report is provided for the use of PMG Direct Office Fund only and may not be used by others without written permission. Rebbeck Dunn Watters Limited accept no liability to third parties who may act on the contents of this report.

This report specifically excludes any investigation or advice on the following:

- Value of the property
- Design of the property
- Code Compliance issues
- Design for maintenance or repair works
- Suitability for purpose of use, whether existing or proposed
- Statutory notices such as Notice to Fix or Compulsory Purchase Orders
- LIM or PIM reports
- Identification of illegal works
- Contamination/ground stability issues
- Restrictive covenants or Rights of Way
- Design or value of the surrounding area or environment
- Lease obligation and financial commitments

References made to contamination, geotechnical issues and deleterious material issues are for guidance only. Purchasers should satisfy themselves in relation to the condition and extent of contamination that may exist at the property.

Specific Limitations

The following limitations apply to the content of this report:

Comments are based on a visual inspection only. No opening up or intrusive testing has been undertaken and as such we cannot guarantee that defects do not exist in those parts of the building which are concealed or are inaccessible.

We have not had sight of lease documentation for the property. However, the landlord has provided direction to help establish ownership and maintenance responsibilities of fabric and services.

Costs provided for remedial works are budgetary only and based on an assumed specification. No allowance has been made for routine maintenance items with only larger items of works captured in the cost plan provided. These costs should not be used as an alternative to obtaining competitive tenders based on a detailed specification. Should you require a more accurate cost estimate, we recommend that a Chartered Quantity Surveyor is engaged.

1.0 INTRODUCTION

This report is concerned with a review of the building fabric and gives comment on the description and condition of the building elements in relation to the building at 213 – 221 Tuam Street, Christchurch.

Agile Ltd have undertaken a Mechanical and Electrical assessment of the building and have provided a report which has been attached in the appendices with the salient points of their report amalgamated into our own comments.

A high level Cost Plan has been appended to this report and details the maintenance requirements for the buildings over the next 10 years and associated costs.

The property was inspected by David Robinson BSc (Hons) MRICS on 14 January 2020 and Matt Burnett BSc (Hons) on 23 December 2019.

1.1.1 Repair Costs

To avoid deterioration of building components, we recommend that a planned maintenance regime is put in place.

The Planned Maintenance Programme in Appendix I is based on observations made during the inspection at the property and makes recommendations on capital expenditure requirements for the next 10 years.

These costs are for budgetary purposes only, exclude statutory fees (if applicable) and may vary following a more detailed inspection and costing exercise.

For ease of reference the Maintenance Schedule estimates costs necessary over the next 10 years to be $537,530.00 Excl. GST and excluding contractor's overheads profits and construction fees.

1.1.2 Site Description

The site is generally level and comprises of a large steel framed office building over 5 storeys, built on a 2,024sqm site with a net lettable area of 8,941sqm.

The original building was believed to have been constructed in 2015 as a purpose built large format office space and currently accommodates the South Island Vodafone Headquarters.

The site is situated in a commercial and retail area near the centre of Christchurch - approximately 1.3km from State Highway 73 and immediately adjacent to Tuam Street situated to the south of the building.

There is a public car park situated to the west of the site and neighbouring offices are located to the north and east.

1.1.3 Summary and Key Observations

The building consists of open plan offices, meeting rooms, welfare areas and W.C. facilities. Office areas, lift lobbies and welfare areas are built around a central atrium which extends the full height of the building with vertical access being available between each floor via a staircase running within the central atrium.

The building is essentially 'L' shaped on plan with a footprint of approximately 1,800sqm with a net lettable area of 8,941sqm. There is a main central core to the building, which houses unisex toilets to all floors, 2no. separate emergency fire staircases and a plant room to each floor housing switch gear.

The structure to the majority of the main building is formed of steel framework and suspended concrete floor slabs. Steel columns are built off a mix of concrete pad. Suspended concrete slabs to the upper floors are understood to be in-situ poured concrete slabs, poured into a 'Traydec' type permanent formwork.

The suspended concrete decks to the building are supported by steel universal beams which are in turn supported by the buildings main steel columns.

The building does not have a basement or on site car parking area with building occupiers presumably using the adjacent public parking areas to the west of the site.

The roof coverings are formed of Kingspan KS1000RW insulated composite panels which fall of approximately 7 degrees, with rainwater discharging into a membrane gutter running the full perimeter of the roof, which in turn discharge rainwater into downpipes which generally run within the Level 5 ceiling void and in turn into building's central core. To the south, downpipes have been routed to run directly down and are formed of metal box sections integrated into the timber cladding to the south elevation.

To the centre of the roof there is a plant area which supported by a concrete deck with a torch on waterproof membrane. The perimeter of the plant area is formed of precast concrete walls which are lined with surface fixed insulation panels – presumably to provide an acoustic barrier to the workings of the mechanical plant on the roof.

The roof structure is formed of the composite Kingspan panels, which are supported by C-Section purlins, which are in turn supported by the building's structural steel universal beams.

External elevations to the south elevation overlooking Tuam Street are formed of a mix of pre cast concrete panel sections, aluminium framed double glazed shop frontages, a 'Thermosash' double glazed unitised curtain wall system and vertical stained timber cladding boards. To the south west corner of the building, a large LED screen has been installed.

The south elevation has a steel framed canopy section over and above the public footpath, which is cantilevered outwards from the south elevation at a pitch of 3 degrees and is supported by a steel rod tied back into the building's main structure. The canopy soffit is formed of stained timber soffits with incorporated downlights.

The east elevation is formed of precast concrete panels to Levels 2, 3, 4 and 5, with a textured coating having been applied to the pre-cast panels to the ground floor. To the north east corner at ground floor level there is a aluminium framed double gazed window section. Windows to the upper floors to the building are formed of single glazed double glazed fixed windows.

The north and west elevations are formed of pre cast concrete panel sections and a 'Thermosash' double glazed unitised curtain wall system with vertical stained timber cladding boards.

The north west facing elevations which house the buildings main staff entrance flank a central court yard and are formed of the same unitised curtain wall system used throughout the building, with architectural aluminium vertical louvres installed to the west facing elevation.

To the north facing section, an additional canopy section has been installed which is formed of steel cantilevered off the building's main structure, with stained timber louvres. The canopy does not have a covering and is architectural in nature.

1.1.4 Structural Appraisal

The structural design of the building was undertaken by Kirk Roberts Consulting. Given that the building was built in 2015, there is no requirement for an Initial Seismic Assessment as the building has been built to current Building Code. From our review of the building, no evidence of structural movement or deflection was noted and we do not have any concerns from a structural perspective.

Kirk Roberts Consulting have a permanent presence in Christchurch and based upon a review of their

previous projects, we note that they have past and existing involvement in significant projects in and around the city.

1.1.5 Building Condition

A visual inspection of the building and external areas has been undertaken. From this inspection we did not identify any unexpected material issues and based on the areas inspected, we believe the building to be in a generally serviceable condition, commensurate with the age, construction and ongoing maintenance of the building.

Some typical defects associated with normal ageing of a building have been observed that require remedial works. These defects are considered normal for a building of this age and use. Notable defects observed during the inspection are summarised below:

1.1.6 Main Office Building

1.1.6.1 Roof Areas

1. The roof sheets are in a serviceable condition and appear well specified and installed. An allowance should be made to repaint over the next 10 years to extend their serviceable life.

2. Timber walking boards to the perimeter of the roof are in a serviceable condition – an allowance should be made to replace or maintain the boards within 10 years.

3. The timber walking boards are believed to be held in place by their own weight – the boards should be checked periodically to ensure boards are not moving or affected by strong winds.

4. Junctions between separate roof sheets noted to be in direct contact with one another in localised areas. There is some concern that differential thermal movement between sheets in contact with one another will increase rates of deterioration – it is recommended that these sections are monitored and that an allowance is made to repair and maintain within 10 years.

5. Membranes to gutters and flat roof sections are serviceable and expected to last longer than 10 years with minimal maintenance.

6. 'Dek-tite' tppe boot flashings are reliant on silicone for watertightness. The flashings are currently serviceable however will deteriorate over time. In line with best practice, it is recommended that these penetrations are back flashed to the roof ridge when replacement is required.

7. Insulation boards installed to roof mounted plant noted to be in a serviceable condition – an allowance should be made to replace any boards which do break over a 10 year period.

8. Access to the ridge is gained in part by placing a foot onto a metal cap flashing over the precast walls of the plant room area – over time, this will cause the cap flashings to deteriorate. It is recommended that a protective plate is installed over the flashing to protect it from damage.

9. Minor corrosion noted to galvanised handrails to the plant area – an allowance should be made to treat and coat affected sections of metal.

1.1.6.2 External Elevations

10. The glazed curtain walling is noted to be in a serviceable condition and appears well specified and installed. No evidence of moisture ingress was noted internally. Given the young age and high value of this element we have reviewed the warranty and recommend that the steps called for are implemented, to prevent the warranty being voided. The maintenance steps are as follows;

    - *Every three months:*
        - *Cleaning down of aluminium with non-alkaline detergent and warm water, applied using soft cloth or sponge*
    - *Every six months for first year*
        - *Check structural silicone joints as noted under "Sealant – Dow Corning"*
    - *Inspection after one year, and then at five-yearly intervals:*
        - *Check all internal Santoprene gaskets to ensure that there is sufficient compression between curtainwall member of the glazed and paneled area. Also check to ensure that corner joints are still acceptable and that seals have not shrunk away from these joints.*
        - *Check that all external drain holes of the horizontal façade members are clear.*
        - *Check to ensure that the transom to mullion fixings are still secure and that excessive gaps or misalighment have not developed.*
        - *Structural glass tension truss and/or spider assemblies to be check/adjusted.*
        - *Externally bolted façade elements, eg Sunblade/solarshade louvres, Treadgrate, Shadegrate, Skylights/rooflights with screwed on cappings, spider assemblies should be checked to ensure bolts are secure.*
    - *After 5 years and then at 10 yearly intervals*
        - *Mullion to structure fixings to ensure that fixings have not corroded excessively and the restraining fasteners are secure.*

11. The textured coating to the south east of the building is noted to have come free in localised areas – it is unknown if this is a deliberate aesthetic appearance, or if the concrete has been impacted with pieces of concrete knocked free in the past. The ground was checked in the vicinity of the concrete and there was no evidence of render recently falling free. Given the very light weight nature of the render that could come free, together with the render being on the ground floor of the building, we are not concerned about this issue from a health and safety perspective.

12. The vertical timber cladding sections are mounted upon brackets, which are in turn mounted to the concrete walls of the building. The cladding sections are serviceable and an allowance should be made to restain over a 10 year period.

13. The main staff entrance consists of a revolving door on the north western elevation – the door was in the process of being repaired at the time of inspection and was not in use. Doors of this type are expensive to install and it is recommended that clarification is sought prior to proceeding with the purchase of the building to ensure the door will be left functional.

14. There are large sliding entrance doors to the north west of the building – small stones and pebbles were noted in the sliding door tracks and it is recommended that these tracks are monitored to ensure stones are kept free – if the doors are opened over the stones, the doors could be damaged.

15. The steel frame to the canopy to the northwest elevation is noted to be corroding in localised areas.

The corrosion should be treated and the steel frame painted to extend its serviceable life.

16. The timber louvres to the canopy will require periodic restaining over the course of the next 5 years to extend their serviceable life.

17. The timber cladding boards to external elevations will require restaining to extend their serviceable life.

18. The aluminium louvres were noted to be serviceable and are unlikely to require maintenance over a 10 year period.

19. The large LED screen is currently displaying a computer game, with large novelty controls to the computer game being located opposite the building on Tuam Street, open to public use. It should be confirmed that this is a Tenant fixture free from any Landlord maintenance requirement.

20. Aco-drains are situated recessed into the grounds to the perimeter of the building and are visibly in a serviceable condition. An allowance should be made to periodically lift and wash out perimeter drains.

1.1.6.3 Environmental Hazards

1. During our inspection, no visible evidence of hazardous or contaminated material was noted which would give cause for concern.

2. From a review of the LIM, it appears multiple sub-surface storage tanks were stored at or near the site which have been removed. We are unsure of the exact location that these tanks were located, however the LIM reads as follows;

    - *Contains or contained a Tank: Council Records indicate that this site contains or contained a Tank*
        - *Details of Tank are as follows:*
            - *Date Installed: NA*
            - *Tank Function: Diesel Volume(l): 5000*
            - *Underground or Above Ground: Underground*
            - *Tank Status: Tank Does Not Exist*
            - *Date Removed: 04-08-2014*
            - *Condition when Removed: NA*
    - *Contains or contained a Tank: Council Records indicate that this site contains or contained a Tank*
        - *Details of Tank are as follows:*
            - *Date Installed: NA*
            - *Tank Function: Kerosene Volume(l): 4500*
            - *Underground or Above Ground: Underground*
            - *Tank Status: Tank Does Not Exist*
            - *Date Removed: 04-08-2014*
            - *Condition when Removed: NA*
            -
    - *Contains or contained a Tank: Council Records indicate that this site contains or contained a Tank*
        - *Details of Tank are as follows:*
            - *Date Installed: NA*

- *Tank Function: Petrol Volume(l): 2700*
- *Underground or Above Ground: Underground*
- *Tank Status: Tank Does Not Exist Date Removed: 09-08-2014*
- *Condition when Removed: NA*

The historic presence of tanks do not give us cause for concern in this instance as they appear to have been removed – in addition, any contamination should have been removed during development. Given that the building is new, it appears unlikely that any redevelopment is planned over the next 10+ years.

If additional certainty is required, we would be able to arrange for additional sampling on your behalf.

1.1.6.4 Services (General):

3. We have noted that the building has a current Warrant of Fitness (WOF) which would imply that the Building Services components are being tested (e.g. emergency lighting, fire protection). The WOF will expire on 6th June 2020.

4. We recommend that building's compliance with fire safety requirements is reviewed by the incumbent Fire Engineer.

5. We recommend that any refurbishment works be completed in accordance with the seismic restraint requirements of NZS4219 and the requirements of the Structural Engineer.

1.1.6.5 Electrical services:

6. Generally, all electrical services are in good operating order and condition.

7. Loose runs of cables in MSB room and risers are to be made good.

8. Mains cabling, and earth connections are recommended to be tested for functionality. This should be carried out every 3 years.

9. The aluminium lining to the generator room wall and ceilings are to be made good with appropriate fixings/clips.

10. Confirmation with the incumbent electrical contractor that fluorescent fittings at ground floor stairs are battery backed up emergency fittings as per specifications.

11. An exit/emergency lighting test logbook should be provided on site in accordance with AS/NZS 2293.1.

1.1.6.6 Fire Protection:

12. Generally, all fire protection services are in good operating order and condition.

13. A type 6 automatic sprinkler fire protection and alarm system is provided to the building.

14. The functionality of the existing main fire alarm panel and brigade connections are recommended to be tested by a third party.

15. Functionality of existing fire alarm interfaces with the security and mechanical systems should be tested. Tests are recommended to be carried out annually to ensure that the fire alarm trips are functional.

16. Regular tests and calibration of heat detectors (comms room) is recommended as per fire standards and equipment manufacturer recommendations.

1.1.6.7 Hydraulic Services:

17. Generally, all hydraulic services are in good operating order and condition.

18. Backflow protection (vacuum breakers) were not seen on all hose taps at the time of visit, we recommend they be provided as required.

19. We recommend the passive fire installations be reviewed and new collars provided as required.

1.1.6.8 Mechanical Services:

20. Generally, all mechanical services are generally in good operating order and condition.

21. Exposed refrigerant pipework insulation requires replacement and protection from UV damage.

22. We consider that mainly minor plant items would require replacement within the next 10 years, including controls and electric heaters and condensate pumps.

23. A damaged roof mounted AHU panel requires repair.

24. Continue routine maintenance, testing and cleaning of plant, ducts and grilles as required.

25. Confirm purpose for dry cooler condenser units located on top of AHUs (not indicated on design drawings reviewed)

26. We recommend that passive requirements to services penetrations at walls, ceiling and floor are reviewed against the fire engineer's report and are provided if required.

27. All new air conditioning systems as part of tenant fit out should include appropriate seismic restraints.

1.1.6.9 Lift Services:

28. The site consists of 3 x passenger lifts and there are no reported existing maintenance issues with the lift.

29. There are no floor numerals on each landing entrance as required by NZS4121. Provide indication of floor level that is visible from inside the lifts.

30. Provide lock off tags to the main switch to allow the equipment to be safely worked on.

1.2 Location

The site is situated in a commercial and retail area near the centre of Christchurch - approximately 1.3km from

State Highway 73 and immediately adjacent to Tuam Street situated to the south of the building.

1.3 Orientation

For the purposes of orientation, the elevation overlooking Tuam Street is deemed to be facing due South.

2.1 Building Services

Note: All comments relating to services are provided by Agile Engineering. The Full Agile Engineering report can be found in Appendix II

2.1.1 Electrical Services

2.1.1.1 System Overview

The existing Electrical Services system consists of the following major components:

1. The building is supplied from a dedicated 1000 kVA transformer, transformer room located at ground floor with access from alley off Tuam Street. Mains supply from the transformer feeds the building main switchboard (MSB) located in the electrical room adjacent.

2. Back-up power supply is provided by a 613kW/750kVA Kohler diesel generator set. Diesel supply to the generator set is from a 7100 litres SuperVault diesel storage tank, providing operation capacity of approximately 44 hours at full load from a full tank. We understand the diesel generator installation is a tenant (Vodafone) supplied item.

3. The MSB and switchgears are in good condition. Power cables at the top of the MSB are neatly terminated with penetrations provided with appropriate cable glands. We recommend thermal scans of the MSB (and distribution boards) are carried out yearly for early detection of any thermal hot spots and rectification.

4. Building Consent set of electrical drawings were available for review. However, no as-built records sighted.

5. Power cables are run on cable trays and ladders in an organised manner. However, some trays in the electrical plant room did not appear to be seismically restrained or did not have adequate clearance between suspended components.

6. Tenancy distribution boards are located within the service riser at each floor; the distribution boards are generally in good condition. Supplies to each of power, lighting and mechanical sections are separately metered to Greenstar requirements. There is provision to accommodate two tenancies at each floor.

7. Interior lighting – the interior lighting design differs between different floors. Generally, suspended LED extrusion fittings and track mounted spot lights have been provided at floors without reflected ceiling and where all services are exposed. Recessed LED troffers have been fitted to floors where ceiling grids have been installed. Recessed downlights are installed in amenities. Lighting appeared in good condition.

8. Lighting controls – tenancy floors lighting control is via a DALI lighting control system with occupancy sensors,

daylight harvesting and switch control from a central light control switch.

Toilets lighting is controlled via occupancy sensors.

9. Emergency and exit lighting are provided in the tenancy floors and in the stairway and appear to be compliant with the requirements of building code.

10. Exterior lighting – exterior of building is illuminated with LED floodlights.

11. Fibre and copper connection are existing with lead-in demarcation point and building distribution frame within a dedicated room at the ground floor.

    Main communications and server room at ground floor is part of Vodafone tenancy and was not inspected. Generally, each floor is provided with one dedicated communication room.

2.1.1.2 Condition Review Summary

Based on our visual inspections, the functional condition of the major Electrical Services components was generally as follows:

Plant/Equipment:	Description:	Condition (refer section 2.10):
Incoming Power Supply and MSB:	Main switch board appeared in good condition. Main cables are neatly organised and terminated onto the MSB. Some loose cables running outside of cable supports were noted. There was no power schematic located adjacent to the MSB.	Good Poor
Distribution Boards (DB)	Tenancy distribution boards are located within a common service riser. The switchboards are neat, in good condition and labelled. DB schedules are provided at each DB. Residual current devices (RCDs) are provided to all circuits supplying wet areas power outlets. Test records were not available for review.	Good
Diesel Generator Set	A 600kW/750kVA Kohler diesel generator set provides power supply back up to the building. The generator equipment is on good condition and has only 18 hours operation recorded. Next service is due March 2020. Generator exhaust flue is insulated and with aluminium cladding. Diesel tank is clean and in as-new condition. Generator room walls are sound insulated with aluminium lining. The lining to the ceiling above the generator was falling off at the time of visit. Generally, the aluminium lining did not appear to be firmly fixed on top of the insulation.	Good Good Good Poor

Plant/Equipment:	Description:	Condition (refer section 2.10):
General Power	Tenancy floors have a raised floor and all power cable reticulates within the raised floor space, terminating onto a starter outlet. Workstation outlets are desk mounted power racks. Cable grommets do not seem to have been provided at cable/floor board interface (this may be a tenant item). Raised floor panels are screw fixed and underfloor services were not sighted during the inspection. Design drawings indicate a main cable tray spline with grid pattern spurs for the power and data cable reticulation (we assume installation has been completed as detailed in drawings).	Good Poor Satisfactory
Lighting	Interior lighting to the floors varied in type and appears to have been changed to suits the tenant's architectural design at the occupied floors. Lighting was typically made up of: • Tenant (Vodafone) occupied floors: suspended linear extrusions fittings and track mounted spots/downlights installed where no reflected ceiling has been provided. Where these have been installed, no review of adequacy of lighting levels or uniformity has been made as part of this exercise. • Lighting at Level 4 (unoccupied floor and assumed original base build provision): recessed 600x600mm ceiling troffers (assumed base build design/provision). • Ground floor: mix of suspended linear extrusions, track mounted spots/downlights and decorative feature lighting. • Plant rooms: surface mounted / suspended weatherproof fluorescent fittings. • Corridors: surface mounted LED oyster lights. • Toilets, amenities: LED downlights. • Exterior: LED floodlights, wall and pole mounted. • Emergency stairs: surface mounted fluorescent fittings with emergency battery back-up. Light fittings are generally in good physical condition.	Good
Lighting controls	Lighting control to all floors is via a DALI automatic system with occupancy sensor and daylight harvesting. A manual override lighting control panel is also provided at each floor. Control modules are housed within the lighting control section of the floor DBs and are in good condition. Toilet lighting is controlled via occupancy sensors. Plant room lighting is controlled via local light switch.	Good

Plant/Equipment:	Description:	Condition (refer section 2.10):
Emergency & exit lighting	Emergency and exit lighting are provided in the building and appear to be compliant to requirement of building code. *(Battery back up provision to the fluorescent light fittings at the ground floor landing of the emergency escape stairs were not fully apparent during the inspection – these are indicated as emergency fittings on the design drawing. We recommend this is confirmed with the incumbent electrical contractor).* Emergency lighting test switch is installed in distribution switchboards. Emergency lighting test reports were not available for review.	Good
Lightning protection	An active air terminal lightning protection system is provided for lightning protection.	Good
Service risers	Service risers were generally well organised. However, loose cables not fixed to supports were visible at some floors. These need to be identified/labelled and fixed to a cable support for future intended use.	Good Poor
Communications	The building has fibre mains lead-in provision in a dedicated room at ground floor. We understand fibre connection is by tenant. A building distribution frame with copper lines is also installed with analogue lines for lift and security services and Cat 3 cabling to each floor. Tenants structured cabling system was not reviewed. TV aerial and satellite dish are existing on the roof with backbone cabling running down the services riser. MATV cables were not terminated to splitters at all floors.	Good Good Satisfactory
Security	Access to building is secured via card access readers at all ground floor access and lift. Emergency break glass are provided to release access-controlled doors in egress path in an emergency. Intruder alarm PIRs were noted. CCTV surveillance cameras are installed at various locations and covers all building accesses, lift lobbies and stair doors at all floors and inside lifts. The access control system controller unit and CCTV head station were not sighted during the site visit.	Good

2.1.1.3 Code Compliance

We have not noted any particular issues as at the date of our visual inspection and can reasonably affirm the electrical services is compliant with current building code.

2.1.1.4 Recommendations

Based on a single visual inspectional inspection, the following rectification work is recommended for the Electrical Services installation:

a) Provision of a single line diagram drawing of the MSB at the switchboard.

b) We recommend yearly thermal scans of the main switchboard and distribution boards as part of preventative maintenance.

c) Making good to loose runs of cables in MSB room and risers.

d) Mains cabling, and earth connections are recommended to be tested for functionality. This should be carried out every 3 years.

e) The aluminium lining to the generator room wall and ceilings be made good with appropriate fixings/clips.

f) Confirmation with the incumbent electrical contractor that fluorescent fittings at ground floor stairs are battery backed up emergency fittings as per specifications.

g) An exit/emergency lighting test logbook should be provided on site in accordance with AS/NZS 2293.1.

h) Verify compliance with NZS 4219 for seismic restraints of mechanical systems.

2.1.1.5 CAPEX Budget Assessment

Refer to Appendix B for the Electrical Services CAPEX budget schedule.

2.1.2 Fire Protection

2.1.2.1 System Overview

The existing fire services system consists of the following major components:

a) The main fire alarm panel is located near the building entrance.

b) Type 6 sprinkler fire protection system with manual call points.

c) Stand-alone smoke detectors in tenancy floors comms room.

d) Fire alarm sounders and speakers are located throughout the building and are visually in good condition.

e) Fire hydrant system in emergency staircase.

f) Fire extinguishers.

g) Comms room gas flood fire extinguishing system (tenant item).

2.1.2.2 Condition Assessment

Based on our visual inspections, the functional condition of the major Fire Protection system components was generally as follows:

Plant/Equipment:	Description:	Condition (refer section 2.10):
Water Supply	Water supply is from the town main off Tuam street and feeding into the sprinkler valve room at south east corner of building.	-
Automatic Fire Sprinkler system	The sprinkler valve arrangement is practically new and appears in good condition. Records indicates sprinkler flow test was carried out in May 2019. Sprinklers are provided to all floors with floor isolation switch at each level.	Good Good
Fire Extinguishers:	Observed fire extinguisher units had up to date test tags and appeared in good condition.	Good
Means of egress	Exit break glass were visually in good condition.	Good
Fire Alarm Panel:	Fire alarm panel is provided at the building entrance and appears to be in good functional condition. Inspection label indicates monthly testing with last test carried out on 11/09/1029.	Good
Emergency Warning System	All fire alarm sounders and speakers are unobstructed, visible and in good condition.	Good
Fire Penetration Seal	Penetrations in tenancy floors were generally concealed and not visible. Some floor/wall penetrations were visible at basement ceiling. However, it was not clearly apparent if fire seals are provided. It is recommended that fire seal requirements to services penetrations at walls, ceiling and floor are reviewed against the fire engineer's report and are provided as and if required to maintain fire ratings.	- Requires further investigation

2.1.2.3 Code Compliance

Except for penetrations to be verified for fire seal requirements and provisions, we have not noted any particular issues as at the date of our visual inspection.

2.1.2.4 Recommendations

Based on a single visual inspection, the existing Fire Protection installation is compliant with the necessary code requirements when it was originally installed.

The following actions are recommended to ensure integrity and functionality of the fire protection services.

a) Fire sealing is to be provided for all services penetrations between separate fire cells. Contractor to carry out a detailed site survey and provide fire sealing wherever necessary. Due diligence checks are to be carried out annually to ensure effectiveness of fire seals.

b) Functionality of existing fire alarm interfaces with the security and mechanical systems should be tested. Tests are recommended to be carried out annually to ensure that the fire alarm trips are functional.

c) Regular tests and calibration of fire alarm detectors (comms room) is recommended as per fire standards and equipment manufacturer recommendations.

2.1.2.5 CAPEX Budget Assessment

Refer to Appendix B for the Fire Protection Services CAPEX budget schedule.

2.1.3 Hydraulic Services

2.1.3.1 System Overview

The existing Hydraulic Services system consists of the following major components:

1. Mains water supply to the building enters at the sprinkler valve room from a service valve box in the footpath. A backflow protection device is located in the sprinkler valve room.
2. Dual domestic cold water booster pumps located in the ground floor boost the pump to the floors.
3. The cold and hot water distribution systems are a mix of copper and polypropylene pipework and generally appeared to be in satisfactory condition.
4. Pulse meters are provided to the domestic hot water and cold water systems.
5. Hydraulic services risers including stormwater and sanitary drainage, were generally accessible in the building central services core.
6. The drainage and vent pipework are plastic piping (uPVC). Drainage was in good condition at the time of inspection.
7. Two 315L electric storage heaters (installed 2016), serve the ground floor toilets and end of journey facilities. Cylinders were provided with seismic restraints. Another storage heater was located on level 3, it was unclear what it served at the time of visit.
8. Each floor is provided with toilets and kitchenettes. The fixtures and appliances appeared to be in good condition.
9. Kitchenettes and tea stations are provided with Zenith under bench boiling water units. They are generally in satisfactory condition.
10. Tenant gas pipework provisions have been installed in the ground floor tenancies. There are no gas requirements for Vodafone.
11. Passive fire collars were not seen at penetrations at the time of visit. We recommend the passive fire installations be verified and reviewed against fire engineer's report.
12. No hydraulics as-built drawings were available for review.

2.1.3.2 Condition Assessment

Based on our visual inspections, the functional condition of the major Hydraulic Services components was generally as follows:

Plant/Equipment:	Description:	Condition (refer section 2.10):
General	Generally, all hydraulic services were installed in 2016 and appear to be in good operating order and condition. There were no obvious issues with the system drainage, venting, odours, or maintenance access at the time of visit. No hydraulics as-built drawings were available for review.	Note only
Domestic cold water	Mains water supply to the building enters from Tuam Street with the service valve in a toby box in the footpath. A backflow	Good

Plant/Equipment:	Description:	Condition (refer section 2.10):
	protection device is located in the fire sprinkler valve room. The hot and cold hot water distribution systems are a mix of copper, and polybutylene grey pipework and generally appeared to be in good condition. Exterior taps at rear of building and at roof did not appear to have back flow prevention, which is a code requirement. Each floor is provided with toilets and kitchenettes. The ground floor is also provided with showers. The fixtures and appliances all appeared to be in good condition	Good Poor Good
Sanitary drainage	Drainage pipe seen at the time of visit appeared to be in good condition. Condition of external underground pipe work to street was not be determined at the time of inspection. CCTV surveillance of underground pipework is recommended if buried sanitary drainage condition is a concern. Passive fire collars were not apparent at drainage penetrations seen. Pulse meters are provided to the domestic hot water and cold water systems. They were in good condition.	Good Note To be further investigated Good
Domestic hot water	Pipework is in new condition and is insulated. Two 315L electric storage heaters (installed 2016), serve the ground floor toilets and end of journey facilities. Cylinders were provided with seismic restraints. Another storage heater was located in the level 3 core plant area, it was unclear what it served at the time of visit, however it was in good condition Kitchenettes are provided with under bench boiling water units They are generally in good condition.	Good Good Good Good
Gas	Tenant gas pipework provisions have been installed in the ground floor tenancies. Note there are no gas requirements in the Vodafone tenancy. There are gas stubs in the road, we assume these are for a future gas meter to be installed by tenant as part of fit out works.	Good

2.1.3.3 Code Compliance

We have found the following code compliance issues with the existing installation:

1. Passive fire provisions may be incomplete. We recommend a review by the Fire Engineer, particularly around the core.
2. Provide back flow prevention to exterior hose taps as required for compliance.

2.1.3.4 Recommendations

We recommend the following: -

a) We recommend passive fire provisions be reviewed by a Fire Engineer.

b) Provide back flow preventors to all hose taps.

2.1.3.5 CAPEX Budget Assessment

Refer to Appendix B for the Hydraulic Services CAPEX budget schedule.

2.1.4 Mechanical Services

2.1.4.1 System Overview

The existing Mechanical Services consists of:

a) Outdoor air ventilation is provided to office spaces via 2 roof mounted air handling units with a heat exchanger (AHU) and ducted to the floors via the main riser.

b) Return air comes from high level return grilles in the atrium.

c) The AHU is provided with VRF and refrigerant coils to precool and to temper the air.

d) Dry coolers located on top of the AHUs also appear to serve the AHUs.

e) The fresh air supply is ducted to the office spaces via the fan coil units.

f) A York chiller and pumps provide chilled water to the FCUs.

g) Miscellaneous MHI DX split systems are provided to serve the comms rooms. Outdoor units are located on the roof.

h) Office heating and cooling is provided via a 2 pipe fan coil unit chilled water system . All services are exposed.

i) The office areas are provided with general extract systems.

j) The toilets are provided with extract via a roof mounted central toilet extract fans.

k) Miscellaneous ventilation systems are provided

l) Duct and façade louvres are provided for ground floor tenant fit out provision.

m) Electric heating is provided to the reception and staff breakout areas.

n) The building is controlled via a Delta Building Management System (BMS).

2.1.4.2 Equipment Condition Assessment

Based on our visual inspections, the functional condition of the major Mechanical Services components was generally as follows:

Plant/Equipment:	Description:	Condition (refer section 2.10):
General AC	Generally, plant appears to be in good condition. The age of the plant is all assumed based on building completion 2016, making it approximately 3 years old. Consultant drawings have been provided for review, however contractor as-built drawings have not been provided.	*Note only*
Roof Plant	The air-conditioning is via a chilled water system provided by one (1) York air-cooled chiller in the roof plant area, the chillers are approximately 3 years old, and in good condition and operate on R134A.	Good

Plant/Equipment:	Description:	Condition (refer section 2.10):
	Pumps located adjacent the chiller plant distribute the CHW to the FCUs throughout the building. Pumps are in good condition. Two Energy Products Air Handling Units (AHU) on the roof distributes filtered outdoor air to the floors via the riser. They also include a return air / spill air heat recovery system and economiser. The units appear to be in good condition; however, one has a damaged panel which may become vulnerable to rust. We recommend this be repaired and treated to maximise economic life. The AHUs are provided with 8 VRF units to pre-heat and pre-cool the outdoor air. They are in good condition. In addition to the VRF plant serving the AHUs, there are 4 dry cooler condenser units located on top of the AHUs. It is unclear what these are for, but they appear to serve the AHUs, and they are not shown on the design drawings reviewed. The units are in good condition and operate on R410A. There are 3 MHI split system outdoor units located in the roof plant area. These serve under ceiling cassettes in the comms cupboards and are in good condition. There are 4 miscellaneous ventilation fans located on the roof that serve the rubbish room and general office areas. They are in good condition. There is a roof cowl for the lift shaft vent. The Mechanical services switchboard (MSSB), VSDs and controls are located on the roof level and are in good condition.	Good Good Good Good Good Good Good
On floor air conditioning plant	The building is served by exposed ducted Fan Coil Units to provide zone control to the floors. Heating is provided via electric heaters in the FCU. The FCUs are in good operating condition. The ground floor comprises of 3 vacant tenancies. They are provided with ventilation openings in the building façade for future fit out.	Good Good
Electric Heaters	Electric heaters are provided to the reception and kitchenette areas to provide supplementary heating.	Good
Miscellaneous fans including: • Toilet extract fan • General extract systems • Rubbish room extract	The toilets, rubbish room and 3 general office extract systems on each level are provided with extract ventilation via a central exhaust system that discharges to a roof fan at the roof plant area; Based on the visual inspection, there is no apparent damage and all fans are operational, and in good condition.	Good
Ductwork and grilles	Exposed duct work appears to be in good condition. We recommend all external ductwork is regularly maintained, cleaned and painted to maximise economic life.	Good

Plant/Equipment:	Description:	Condition (refer section 2.10):
	Plenum boxes are supported properly with seismic restraints and provided with acoustic insulation	Good
	Internal ductwork surfaces could not be observed at the time of inspection. It is recommended that the mechanical maintenance contractor investigate internal ductwork surfaces to assess whether they are clean.	Good
	Supply and return grilles in tenancies are in good condition.	Good
Air-conditioning pipework.	Chilled water pumps, pipework and ancillaries all appeared to be in good condition.	Good
	There has been a mechanical valve leak reported on level 2, which had been repaired at the time of visit. This was likely due to faulty product or workmanship rather than an operational issue; however, we recommend the chilled water system continue to be monitored for leaks and logged as required.	Note
	Roof mounted exposed pipework in the roof plant area is clad and weather protected.	Good
	Refrigerant pipe lagging to the outdoor units at the roof plant level had no UV protection and has already started to fail. We recommend this be repaired and protected to maximise efficient operation and economic life.	Good
Comms room AC	Under ceiling cassette air conditioning units are provided for comms room cooling and are fitted with condensate pumps.	Good
	AC units are controlled via local wall mounted controllers, which appeared in good condition.	
Mechanical Services Electrical and Controls	The Mechanical services switchboard (MSSB), VSDs, controllers and on floor controllers seen at the time of visit were all in good condition.	Good
	The building is provided with a Delta (Direct Controls) BMS and VSDs. No BMS PC was seen on site at the time of visit. We have assumed the BMS is accessed remotely.	Good
Fire Penetrations	It is recommended that fire seal requirements to services penetrations at walls, ceiling and floor are reviewed against the fire engineer's report and are provided as and if required to maintain fire ratings.	For further investigation

2.1.4.3 Code Compliance

We did not find any code compliance issues with the existing installation:

Note that Agile Engineering were not engaged to perform airflow testing/measurements of ventilation systems, however based on the inspection and the information provided we do not see any reason as to why compliant flow rates would not be achieved.

2.1.4.4 Recommendations

We recommend the following: -

a) Replace exposed refrigerant pipework insulation and protect from UV.

b) New systems (ground floor tenant fit out) should include appropriate seismic restraints.

c) Perform a passive fire review of all mechanical penetrations at fire rated partitions.

d) Continue routine maintenance, testing and cleaning of plant, ducts and grilles as required.

e) Repair damaged AHU panel as necessary.

f) Confirm purpose for dry cooler condenser units located on top of AHUs.

2.1.4.5 CAPEX Budget Assessment

Refer to Appendix B for the Mechanical Services CAPEX budget schedule.

2.1.5 Lift Services

2.1.5.1 Passenger Lifts Description

There are three number lifts located in the central core. All three lifts are to the same specifications, details are as tabled below:

Lift Description:	Passenger lift 1 / 2 / 3
Lift Manufacturer:	Schindler
Lift Maintenance Contractor:	Schindler
Installation date:	2016
Capacity:	1150kg / 16 Person
Floors Served:	5 (Ground + 4)
Speed:	1.0 m/s
Door Type & Width:	Two panel centre opening / 500mm
Door Size	1000mm

Lift were in good operational condition at the time of visit and runs smoothly. Stops are level at landings and doors open smoothly.

2.1.5.2 Code Compliance

We have found the following code compliance issues with the existing installation:

a) No lock off tags at the main switch to allow the equipment to be safely worked on.

b) There were no floor numerals at each landing as required by NZS 4121

2.1.5.3 Recommendations

We noted the following items to be considered for the passenger lifts. We understand that these components will be covered under the terms of the Comprehensive Maintenance Contract that is currently in place.

a) Fully test lift operation including lift alarm button, and lift phone button.

b) Provide floor numerals on each landing entrance.

c) Provide lock off tags to the main switch to allow the equipment to be safely worked on.

2.1.5.4 CAPEX Budget Assessment

Refer to Appendix B for the Lift Services CAPEX budget schedule.

3.0 Compliance With Legislation

3.1 Status of Property

We have considered legislation that is relevant to potential Owner and Managers of commercial property. The following is not an exhaustive list and our observations are from a construction view point only. A detailed inspection of the property for compliance with legislation has not been undertaken and the following comments are based on a Building Surveyor's observations, in passing, at the respective properties.

3.2 Building & Resource Consent

We have not had sight of the consent documentation in relation to works undertaken on the site since the original construction.

Based upon our review of the site, we do not believe that works have been undertaken in a manner which would fail to meet the Building Code since the date of construction, however if you have any specific concerns or could provide us with any Building Consent applications which may exist, we would be able to provide further comment.

3.3 Building Warrant of Fitness

The building has a valid Building Warrant of Fitness which expires on 1st June 2020. We recommend you obtain copies of the current Certificates and Compliance Schedules if you have not already.

3.4 Toilet Provision

We have not undertaken a detailed analysis of the toilet provision to the building however, it is considered to be adequately provisioned for its use class.

3.5 Disabled Access

The building has level access to all floors. No dedicated parking is provided.

4.0 Environmental Hazards

4.1 General

A detailed inspection of the properties and site for environmental hazards has not been undertaken however, we did not make note of any potential environmental hazards during our inspection.

The buildings were constructed after the period when asbestos products were generally used in construction. It is therefore unlikely that asbestos-based products are present at the premises.

Rebbeck
Dunn
Watters

APPENDIX I

AGILE ENGINEERING REPORT

VODAFONE INNOV8

213 Tuam Street, Christchurch

BUILDING SERVICES CONDITION ASSESSMENT REPORT

PROJECT NO. B010328
Rev 0
January 2020

AGILE

ENGINEERING CONSULTANTS

MODIFICATION HISTORY
This document is version controlled via the use of revision numbers. The revision numbers will be incremented each time the document is changed.

REVISION HISTORY

Revision	Date	Modification	Report By:	Approved:
Rev 0	22 January 2020	Initial report for review	Christophe Kwai Pun (BTech), Adam Vietri (BEng)	Alan Maharaj (BEng$_{HONS}$), CMEngNZ, CPEng)

Document Reference: B010328 - Vodafone Innov8 Christchurch - TDD Report Rev0

CONTENTS

SECTION 1 EXECUTIVE SUMMARY

Agile Engineering Consultants Limited ("Agile") was engaged by Property Managers Group ("Instructing Party") to undertake a site review of the existing commercial building at Vodafone Innov8, 213 Tuam Street, Christchurch with an aim of carrying out a condition assessment of the base building Electrical, Fire Protection, Hydraulic, Lift and Mechanical Services (together referred to in this report as "Building Services").

This report presents the findings of a single non-intrusive visual inspection undertaken on 14th of January 2020 and information provided by the building owner to Agile as at the date of this report.

Key findings and recommendations of this report are as follows:

- **GENERAL:**
  i. We have noted that the building has a current Warrant of Fitness (WOF) which would imply that the Building Services components are being tested (e.g. emergency lighting, fire protection). The WOF will expire on 6th June 2020.
  ii. We recommend that building's compliance with fire safety requirements is reviewed by the incumbent Fire Engineer.
  iii. We recommend that any refurbishment works be completed in accordance with the seismic restraint requirements of NZS4219 and the requirements of the Structural Engineer.
- **ELECTRICAL SERVICES:**
  i. Generally, all electrical services are in good operating order and condition.
  ii. Loose runs of cables in MSB room and risers are to be made good.
  iii. Mains cabling, and earth connections are recommended to be tested for functionality. This should be carried out every 3 years.
  iv. The aluminium lining to the generator room wall and ceilings are to be made good with appropriate fixings/clips.
  v. Confirmation with the incumbent electrical contractor that fluorescent fittings at ground floor stairs are battery backed up emergency fittings as per specifications.
  vi. An exit/emergency lighting test logbook should be provided on site in accordance with AS/NZS 2293.1.
- **FIRE PROTECTION SERVICES:**
  i. Generally, all fire protection services are in good operating order and condition.
  ii. A type 6 automatic sprinkler fire protection and alarm system is provided to the building.
  iii. The functionality of the existing main fire alarm panel and brigade connections are recommended to be tested by a third party.
  iv. Functionality of existing fire alarm interfaces with the security and mechanical systems should be tested. Tests are recommended to be carried out annually to ensure that the fire alarm trips are functional.
  v. Regular tests and calibration of heat detectors (comms room) is recommended as per fire standards and equipment manufacturer recommendations.
- **HYDRAULIC SERVICES:**
  i. Generally, all hydraulic services are in good operating order and condition.
  ii. Backflow protection (vacuum breakers) were not seen on all hose taps at the time of visit, we recommend they be provided as required.
  iii. We recommend the passive fire installations be reviewed and new collars provided as required.
- **MECHANICAL SERVICES:**
  i. Generally, all mechanical services are generally in good operating order and condition.

ii. Exposed refrigerant pipework insulation requires replacement and protection from UV damage.

iii. We consider that mainly minor plant items would require replacement within the next 10 years, including controls and electric heaters and condensate pumps.

iv. A damaged roof mounted AHU panel requires repair.

v. Continue routine maintenance, testing and cleaning of plant, ducts and grilles as required.

vi. Confirm purpose for dry cooler condenser units located on top of AHUs (not indicated on design drawings reviewed)

vii. We recommend that passive requirements to services penetrations at walls, ceiling and floor are reviewed against the fire engineer's report and are provided if required.

viii. All new air conditioning systems as part of tenant fit out should include appropriate seismic restraints.

- **LIFT SERVICES:**

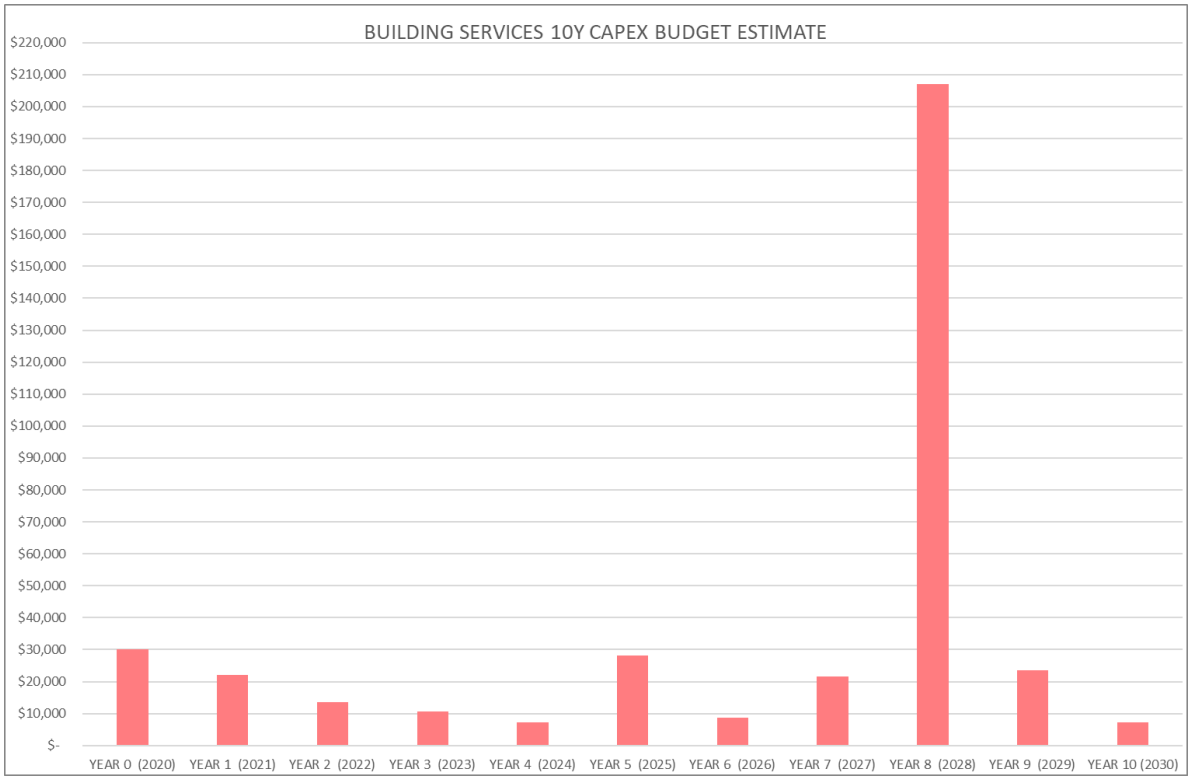
i. The site consists of 3 x passenger lifts and there are no reported existing maintenance issues with the lift.

ii. There are no floor numerals on each landing entrance as required by NZS4121. Provide indication of floor level that is visible from inside the lifts.

iii. Provide lock off tags to the main switch to allow the equipment to be safely worked on.

- **CAPEX BUDGET ESTIMATES:**

The following graph represents the CAPEX budget estimates for the recommended works:



SECTION 2 INTRODUCTION

2.1 Extent of Instruction

This document is for the sole use for the Instructing Party for its present review of the subject. This document and its content are not to be re-supplied to any other party whatsoever. Use by or reliance upon this document or any part of its content by any other party is not authorised by Agile, and Agile is not liable for any loss from such unauthorised use or reliance.

The content of this document has been derived in part, from information provided to Agile from other sources, including the building owner. In passing this information on Agile does not warrant that such information or assumptions are accurate or correct, To the extent that this document includes any statement by Agile as to a future matter, that statement is provided as an estimate and/or professional opinion based on information known to or provided to Agile at the date of preparing this document, and Agile does not warrant that such statements are, or will be, accurate or correct.

This report does not include any review or comment about the following:

a) The structure or seismic assessment of the building;
b) Geotechnical issues;
c) The presence of asbestos, or any ACM, or any Asbestos Management Plan;
d) The value of the land or building;
e) The presence or absence of materials hazardous to health of persons.

Additionally, in completing this document, no search has been made of:

a) Council records, including LIM or PIM reports;
b) Government valuation;
c) Any previous condition assessment records

2.2 General Description

The four level building was completed in 2016 and comprises of three occupied levels and one vacant floor (4th Floor). These is no car parking.

2.3 Aim

The outcomes of this report were to be as follows:

- Brief description and condition of existing Building Services;
- Comment on compliance with current statutory requirements;
- Recommendations to upgrade components of existing installation which are at the end of their economic life;
- Recommendations to upgrade Building Services to meet current industry “good practice”.
- 10 year deferred maintenance CAPEX budget (note that budget figures are high level engineer’s estimates rather than a detailed QS cost plan);

2.4 Methodology

A visual inspection of the property Building Services was undertaken on 14th January 2020. Photographs were taken throughout the course of the survey, with a selection presented in Appendix A of this report.

Discussions were held with the maintenance contractors, where available, to establish a general understanding of the Building Services systems.

2.5 Building Services Included

The scope of work for this base building review includes:

- Mechanical Services includes:
    - Review of as-built drawings and maintenance records if available

  - Air conditioning / natural ventilation
  - Exhaust mechanical ventilation
  - Mechanical services electrical and control systems
- Electrical Services includes:
  - Review of as-built drawings and maintenance records if available
  - Main electrical switchboard and any major distribution boards
  - Power distribution system
  - Internal and external lighting
  - Lighting controls systems
  - Data cabling distribution
  - Emergency and exit lighting
  - Security systems
- Fire Protection Services includes:
  - Review of as-built drawings and maintenance records if available
  - High level review of automatic fire alarm systems
  - High level review of automatic fire sprinkler systems
- Lift Services includes:
  - Review of as-built drawings and maintenance records
  - Review of 3 x passenger lifts;
- Hydraulic Services:
  - Internal building plumbing, water supply and sanitary drainage;
  - Review of hot water systems (condition only not capacity)

2.6 Exclusions

The scope of work for this base building review excludes:

- The inspection did not include any areas or components which are concealed or closed in behind finished surfaces or which require the moving of anything which impedes access or limited visibility (such as floor coverings, furniture, appliances, personal property, vehicles, vegetation, debris or soil) or areas which we are prevented from accessing.
- Communications services, communications room and IT systems review;
- Electrical Services:
  - Performance testing of the emergency and exit lighting to determine compliance and likelihood of failure
  - Load monitoring of existing main switch boards and sub-switchboard
  - Testing of RCD circuit breakers
  - Thermal imaging of existing switch boards to locate any dry joints nearing failure
  - Earth loop impedance testing of mains cables
  - Lighting survey measurements
  - MATV signal tests
  - Security system call out and fire alarm interfaces testing

- UPS and diesel generator system review.

- Mechanical Services:
  - Capacity testing of existing air conditioning or ventilation systems
- Fire Protection:
  - Fire interfaces
  - Intrusive review of existing fire panel(s);
- Lift services performance and travel times assessment.
- Review of Passive Fire, Acoustic, Fire Engineering, Civil or Structural Engineering Services
- Our inspections were visual only and no destructive or intrusive inspections were undertaken.
- No design calculations or modelling were undertaken as part of this phase of the works.
- Works related to specialist tenant equipment;
- This report does not provide a detailed assessment of occupational health and safety issues associated with the services installation.

2.7 Reporting Conditions

This report has been prepared under the following conditions of engagement:

- This report is provided for the use of the Instructing Party and their legal representatives only. Agile Engineering Consultants Ltd accepts no liability to third parties who may act on the contents of this report.
- This is a report of a visual only, non-invasive inspection of the areas of the building which were readily visible at the time of inspection. Whether the building is vacant or occupied, access to certain areas may have been restricted. The inspection did not include any areas or components which were concealed or closed in behind finished surfaces (such as plumbing, drainage, heating, framing, ventilation, insulation or wiring) or which required the moving of anything which impeded access or limited visibility (such as floor coverings, furniture, appliances, personal property, vehicles, vegetation, debris or soil).
- The inspection did not assess compliance with the NZ Building Code. On request, specialist instructions can be arranged of any systems.
- We have not been appointed to report on hazardous or deleterious materials. However, any relevant comments or observations are reported herein
- As the purpose of the inspection was to assess the general condition of the Building Services based on the limited visual inspection described above, this report may not identify all past, present or future defects. Descriptions in this report of systems or appliances relate to existence only and not adequacy or life expectancy. Any area or any item of systems not specifically identified in this report as having been inspected was excluded from the scope of the inspection.

2.8 Budget Estimates

Costs where provided throughout this report are for guidance and budget purposes only and relate to the completion of the required remedial works using present day values. No allowance has been made for inflation. The budgets do not include allowances for routine maintenance works as part of a planned maintenance programme unless stated.

The costs are exclusive of any professional fees, statutory consent(s) charges and GST.

We recommend that competitive quotations or tenders are invited for the carrying out of the required works. It is likely that such quotations and tenders will vary from the budget guidance to reflect market conditions and the demand for works. We can advise further on the preparation of an appropriate design and specification, and the procurement of competitive tender submissions and evaluations.

2.9 Economic Life

The term economic life is used to estimate when plant items and systems may need to be replaced. However, it is only an average estimate and there are many variables to consider which includes run time, obsolescence, availability of spare parts, maintenance, environmental conditions, change of use, changes in laws, etc. It is quite common for items to fail well before their expected economic life and also for items to last well beyond it.

As examples:

- A pump located out in the open will have a much shorter life than the same one in a plant room.
- Split systems running on R22 refrigerant are becoming obsolete because they use a refrigerant that is about to be banned, yet they may still be perfectly functional.
- Other components, such as ductwork, will last almost forever, but may be removed when the requirements of the building change.
- The life of pipework systems depends very much on proper maintenance and water treatment. Some have been known to fail within a few years, whilst others can last 70 years or more.
- Moving parts and electronic components can wear out or corrode.
- It is quite common, particularly with rapidly evolving technology, that there may be problems with backwards compatibility and availability of spare parts.
- Operating 24 hours a day will shorten expected economic life.
- Marine and coastal environments can be particularly harsh on outdoor equipment.

The economic life of plant/equipment stated in this report have been based on a combination of CIBSE (Chartered Institute of Building Services Engineers) Guide M “indicative life expectancy factors”, AIRAH data and the respective Engineer’s personal technical experience.

2.10 Condition Grading Matrix

The following defines the condition comments of the elements surveyed:

New:	Brand new item.
Very Good:	Items which have suffered minimal weathering, wear or decay and are free from any visual defects.
Good:	Items which have suffered some weathering, wear or decay and are free from any visual defects
Satisfactory:	Item s that have worn through ‘normal’ use and weathering and are in commensurate condition to the building age and use.
Poor:	Items that are worn, decayed or weathered either due to their age, abnormal use or lack of maintenance.
Very Poor:	Items that are very worn, decayed or weathered either due to their age, abnormal use or lack of maintenance.

SECTION 3 ELECTRICAL SERVICES

3.1 System Overview

The existing Electrical Services system consists of the following major components:

a) The building is supplied from a dedicated 1000 kVA transformer, transformer room located at ground floor with access from alley off Tuam Street. Mains supply from the transformer feeds the building main switchboard (MSB) located in the electrical room adjacent.

b) Back-up power supply is provided by a 613kW/750kVA Kohler diesel generator set. Diesel supply to the generator set is from a 7100 litres SuperVault diesel storage tank, providing operation capacity of approximately 44 hours at full load from a full tank. We understand the diesel generator installation is a tenant (Vodafone) supplied item.

c) The MSB and switchgears are in good condition. Power cables at the top of the MSB are neatly terminated with penetrations provided with appropriate cable glands. We recommend thermal scans of the MSB (and distribution boards) are carried out yearly for early detection of any thermal hot spots and rectification.

d) Building Consent set of electrical drawings were available for review. However, no as-built records sighted.

e) Power cables are run on cable trays and ladders in an organised manner. However, some trays in the electrical plant room did not appear to be seismically restrained or did not have adequate clearance between suspended components.

f) Tenancy distribution boards are located within the service riser at each floor; the distribution boards are generally in good condition. Supplies to each of power, lighting and mechanical sections are separately metered to Greenstar requirements. There is provision to accommodate two tenancies at each floor.

g) Interior lighting – the interior lighting design differs between different floors. Generally, suspended LED extrusion fittings and track mounted spot lights have been provided at floors without reflected ceiling and where all services are exposed. Recessed LED troffers have been fitted to floors where ceiling grids have been installed. Recessed downlights are installed in amenities. Lighting appeared in good condition.

h) Lighting controls – tenancy floors lighting control is via a DALI lighting control system with occupancy sensors, daylight harvesting and switch control from a central light control switch.

Toilets lighting is controlled via occupancy sensors.

i) Emergency and exit lighting are provided in the tenancy floors and in the stairway and appear to be compliant with the requirements of building code.

j) Exterior lighting – exterior of building is illuminated with LED floodlights.

k) Fibre and copper connection are existing with lead-in demarcation point and building distribution frame within a dedicated room at the ground floor.

Main communications and server room at ground floor is part of Vodafone tenancy and was not inspected. Generally, each floor is provided with one dedicated communication room.

3.2 Condition Review Summary

Based on our visual inspections, the functional condition of the major Electrical Services components was generally as follows:

Plant/Equipment:	Description:	Condition (refer section 2.10):
Incoming Power Supply and MSB:	Main switch board appeared in good condition. Main cables are neatly organised and terminated onto the MSB. Some loose cables running outside of cable supports were noted.	Good Poor

Plant/Equipment:	Description:	Condition (refer section 2.10):
	There was no power schematic located adjacent to the MSB.	
Distribution Boards (DB)	Tenancy distribution boards are located within a common service riser. The switchboards are neat, in good condition and labelled. DB schedules are provided at each DB. Residual current devices (RCDs) are provided to all circuits supplying wet areas power outlets. Test records were not available for review.	Good
Diesel Generator Set	A 600kW/750kVA Kohler diesel generator set provides power supply back up to the building. The generator equipment is on good condition and has only 18 hours operation recorded. Next service is due March 2020. Generator exhaust flue is insulated and with aluminium cladding. Diesel tank is clean and in as-new condition. Generator room walls are sound insulated with aluminium lining. The lining to the ceiling above the generator was falling off at the time of visit. Generally, the aluminium lining did not appear to be firmly fixed on top of the insulation.	Good Good Good Poor
General Power	Tenancy floors have a raised floor and all power cable reticulates within the raised floor space, terminating onto a starter outlet. Workstation outlets are desk mounted power racks. Cable grommets do not seem to have been provided at cable/floor board interface (this may be a tenant item). Raised floor panels are screw fixed and underfloor services were not sighted during the inspection. Design drawings indicate a main cable tray spline with grid pattern spurs for the power and data cable reticulation (we assume installation has been completed as detailed in drawings).	Good Poor Satisfactory
Lighting	Interior lighting to the floors varied in type and appears to have been changed to suits the tenant's architectural design at the occupied floors. Lighting was typically made up of: • Tenant (Vodafone) occupied floors: suspended linear extrusions fittings and track mounted spots/downlights installed where no reflected ceiling has been provided. Where these have been installed, no review of adequacy of lighting levels or uniformity has been made as part of this exercise. • Lighting at Level 4 (unoccupied floor and assumed original base build provision): recessed 600x600mm ceiling troffers (assumed base build design/provision). • Ground floor: mix of suspended linear extrusions, track mounted spots/downlights and decorative feature lighting. • Plant rooms: surface mounted / suspended	Good

Plant/Equipment:	Description:	Condition (refer section 2.10):
	weatherproof fluorescent fittings. • Corridors: surface mounted LED oyster lights. • Toilets, amenities: LED downlights. • Exterior: LED floodlights, wall and pole mounted. • Emergency stairs: surface mounted fluorescent fittings with emergency battery back-up. Light fittings are generally in good physical condition.	
Lighting controls	Lighting control to all floors is via a DALI automatic system with occupancy sensor and daylight harvesting. A manual override lighting control panel is also provided at each floor. Control modules are housed within the lighting control section of the floor DBs and are in good condition. Toilet lighting is controlled via occupancy sensors. Plant room lighting is controlled via local light switch.	Good
Emergency & exit lighting	Emergency and exit lighting are provided in the building and appear to be compliant to requirement of building code. *(Battery back up provision to the fluorescent light fittings at the ground floor landing of the emergency escape stairs were not fully apparent during the inspection – these are indicated as emergency fittings on the design drawing. We recommend this is confirmed with the incumbent electrical contractor).* Emergency lighting test switch is installed in distribution switchboards. Emergency lighting test reports were not available for review.	Good
Lightning protection	An active air terminal lightning protection system is provided for lightning protection.	Good
Service risers	Service risers were generally well organised. However, loose cables not fixed to supports were visible at some floors. These need to be identified/labelled and fixed to a cable support for future intended use.	Good Poor
Communications	The building has fibre mains lead-in provision in a dedicated room at ground floor. We understand fibre connection is by tenant. A building distribution frame with copper lines is also installed with analogue lines for lift and security services and Cat 3 cabling to each floor. Tenants structured cabling system was not reviewed. TV aerial and satellite dish are existing on the roof with backbone cabling running down the services riser. MATV cables were not terminated to splitters at all floors.	Good Good Satisfactory

Plant/Equipment:	Description:	Condition (refer section 2.10):
Security	Access to building is secured via card access readers at all ground floor access and lift. Emergency break glass are provided to release access-controlled doors in egress path in an emergency. Intruder alarm PIRs were noted. CCTV surveillance cameras are installed at various locations and covers all building accesses, lift lobbies and stair doors at all floors and inside lifts. The access control system controller unit and CCTV head station were not sighted during the site visit.	Good

3.3 Code Compliance

We have not noted any particular issues as at the date of our visual inspection and can reasonably affirm the electrical services is compliant with current building code.

3.4 Recommendations

Based on a single visual inspectional inspection, the following rectification work is recommended for the Electrical Services installation:

a) Provision of a single line diagram drawing of the MSB at the switchboard.

b) We recommend yearly thermal scans of the main switchboard and distribution boards as part of preventative maintenance.

c) Making good to loose runs of cables in MSB room and risers.

d) Mains cabling, and earth connections are recommended to be tested for functionality. This should be carried out every 3 years.

e) The aluminium lining to the generator room wall and ceilings be made good with appropriate fixings/clips.

f) Confirmation with the incumbent electrical contractor that fluorescent fittings at ground floor stairs are battery backed up emergency fittings as per specifications.

g) An exit/emergency lighting test logbook should be provided on site in accordance with AS/NZS 2293.1.

h) Verify compliance with NZS 4219 for seismic restraints of mechanical systems.

3.5 CAPEX Budget Assessment

Refer to Appendix B for the Electrical Services CAPEX budget schedule.

SECTION 4 FIRE PROTECTION

4.1 System Overview

The existing fire services system consists of the following major components:

a) The main fire alarm panel is located near the building entrance.

b) Type 6 sprinkler fire protection system with manual call points.

c) Stand-alone smoke detectors in tenancy floors comms room.

d) Fire alarm sounders and speakers are located throughout the building and are visually in good condition.

e) Fire hydrant system in emergency staircase.

f) Fire extinguishers.

g) Comms room gas flood fire extinguishing system (tenant item).

4.2 Condition Assessment

Based on our visual inspections, the functional condition of the major Fire Protection system components was generally as follows:

Plant/Equipment:	Description:	Condition (refer section 2.10):
Water Supply	Water supply is from the town main off Tuam street and feeding into the sprinkler valve room at south east corner of building.	-
Automatic Fire Sprinkler system	The sprinkler valve arrangement is practically new and appears in good condition. Records indicates sprinkler flow test was carried out in May 2019. Sprinklers are provided to all floors with floor isolation switch at each level.	Good Good
Fire Extinguishers:	Observed fire extinguisher units had up to date test tags and appeared in good condition.	Good
Means of egress	Exit break glass were visually in good condition.	Good
Fire Alarm Panel:	Fire alarm panel is provided at the building entrance and appears to be in good functional condition. Inspection label indicates monthly testing with last test carried out on 11/09/1029.	Good
Emergency Warning System	All fire alarm sounders and speakers are unobstructed, visible and in good condition.	Good
Fire Penetration Seal	Penetrations in tenancy floors were generally concealed and not visible. Some floor/wall penetrations were visible at basement ceiling. However, it was not clearly apparent if fire seals are provided. It is recommended that fire seal requirements to services penetrations at walls, ceiling and floor are reviewed against the fire engineer's report and are provided as and if required to maintain fire ratings.	- Requires further investigation

4.3 Code Compliance

Except for penetrations to be verified for fire seal requirements and provisions, we have not noted any particular issues as at the date of our visual inspection.

4.4 Recommendations

Based on a single visual inspection, the existing Fire Protection installation is compliant with the necessary code requirements when it was originally installed.

The following actions are recommended to ensure integrity and functionality of the fire protection services.

a) Fire sealing is to be provided for all services penetrations between separate fire cells. Contractor to carry out a detailed site survey and provide fire sealing wherever necessary. Due diligence checks are to be carried out annually to ensure effectiveness of fire seals.

b) Functionality of existing fire alarm interfaces with the security and mechanical systems should be tested. Tests are recommended to be carried out annually to ensure that the fire alarm trips are functional.

c) Regular tests and calibration of fire alarm detectors (comms room) is recommended as per fire standards and equipment manufacturer recommendations.

4.5 CAPEX Budget Assessment

Refer to Appendix B for the Fire Protection Services CAPEX budget schedule.

SECTION 5 HYDRAULIC SERVICES

5.1 System Overview

The existing Hydraulic Services system consists of the following major components:

a) Mains water supply to the building enters at the sprinkler valve room from a service valve box in the footpath. A backflow protection device is located in the sprinkler valve room.

b) Dual domestic cold water booster pumps located in the ground floor boost the pump to the floors.

c) The cold and hot water distribution systems are a mix of copper and polypropylene pipework and generally appeared to be in satisfactory condition.

d) Pulse meters are provided to the domestic hot water and cold water systems.

e) Hydraulic services risers including stormwater and sanitary drainage, were generally accessible in the building central services core.

f) The drainage and vent pipework are plastic piping (uPVC). Drainage was in good condition at the time of inspection.

g) Two 315L electric storage heaters (installed 2016), serve the ground floor toilets and end of journey facilities. Cylinders were provided with seismic restraints. Another storage heater was located on level 3, it was unclear what it served at the time of visit.

h) Each floor is provided with toilets and kitchenettes. The fixtures and appliances appeared to be in good condition.

i) Kitchenettes and tea stations are provided with Zenith under bench boiling water units. They are generally in satisfactory condition.

j) Tenant gas pipework provisions have been installed in the ground floor tenancies. There are no gas requirements for Vodafone.

k) Passive fire collars were not seen at penetrations at the time of visit. We recommend the passive fire installations be verified and reviewed against fire engineer's report.

l) No hydraulics as-built drawings were available for review.

5.2 Condition Assessment

Based on our visual inspections, the functional condition of the major Hydraulic Services components was generally as follows:

Plant/Equipment:	Description:	Condition (refer section 2.10):
General	Generally, all hydraulic services were installed in 2016 and appear to be in good operating order and condition. There were no obvious issues with the system drainage, venting, odours, or maintenance access at the time of visit. No hydraulics as-built drawings were available for review.	Note only
Domestic cold water	Mains water supply to the building enters from Tuam Street with the service valve in a toby box in the footpath. A backflow protection device is located in the fire sprinkler valve room. The hot and cold hot water distribution systems are a mix of copper, and polybutylene grey pipework and generally appeared to be in good condition. Exterior taps at rear of building and at roof did not appear to have back flow prevention, which is a code requirement. Each floor is provided with toilets and kitchenettes. The ground floor is also provided with showers. The fixtures and	Good Good Poor Good

Plant/Equipment:	Description:	Condition (refer section 2.10):
	appliances all appeared to be in good condition	
Sanitary drainage	Drainage pipe seen at the time of visit appeared to be in good condition. Condition of external underground pipe work to street was not be determined at the time of inspection. CCTV surveillance of underground pipework is recommended if buried sanitary drainage condition is a concern. Passive fire collars were not apparent at drainage penetrations seen. Pulse meters are provided to the domestic hot water and cold water systems. They were in good condition.	Good Note To be further investigated Good
Domestic hot water	Pipework is in new condition and is insulated. Two 315L electric storage heaters (installed 2016), serve the ground floor toilets and end of journey facilities. Cylinders were provided with seismic restraints. Another storage heater was located in the level 3 core plant area, it was unclear what it served at the time of visit, however it was in good condition Kitchenettes are provided with under bench boiling water units They are generally in good condition.	Good Good Good Good
Gas	Tenant gas pipework provisions have been installed in the ground floor tenancies. Note there are no gas requirements in the Vodafone tenancy. There are gas stubs in the road, we assume these are for a future gas meter to be installed by tenant as part of fit out works.	Good

5.3 Code Compliance

We have found the following code compliance issues with the existing installation:

1. Passive fire provisions may be incomplete. We recommend a review by the Fire Engineer, particularly around the core.
2. Provide back flow prevention to exterior hose taps as required for compliance.

5.4 Recommendations

We recommend the following: -

a) We recommend passive fire provisions be reviewed by a Fire Engineer.

b) Provide back flow preventors to all hose taps.

5.5 CAPEX Budget Assessment

Refer to Appendix B for the Hydraulic Services CAPEX budget schedule.

SECTION 6 MECHANICAL SERVICES

6.1 System Overview

The existing Mechanical Services consists of:

a) Outdoor air ventilation is provided to office spaces via 2 roof mounted air handling units with a heat exchanger (AHU) and ducted to the floors via the main riser.

b) Return air comes from high level return grilles in the atrium.

c) The AHU is provided with VRF and refrigerant coils to precool and to temper the air.

d) Dry coolers located on top of the AHUs also appear to serve the AHUs.

e) The fresh air supply is ducted to the office spaces via the fan coil units.

f) A York chiller and pumps provide chilled water to the FCUs.

g) Miscellaneous MHI DX split systems are provided to serve the comms rooms. Outdoor units are located on the roof.

h) Office heating and cooling is provided via a 2 pipe fan coil unit chilled water system . All services are exposed.

i) The office areas are provided with general extract systems.

j) The toilets are provided with extract via a roof mounted central toilet extract fans.

k) Miscellaneous ventilation systems are provided

l) Duct and façade louvres are provided for ground floor tenant fit out provision.

m) Electric heating is provided to the reception and staff breakout areas.

n) The building is controlled via a Delta Building Management System (BMS).

6.2 Equipment Condition Assessment

Based on our visual inspections, the functional condition of the major Mechanical Services components was generally as follows:

Plant/Equipment:	Description:	Condition (refer section 2.10):
General AC	Generally, plant appears to be in good condition. The age of the plant is all assumed based on building completion 2016, making it approximately 3 years old. Consultant drawings have been provided for review, however contractor as-built drawings have not been provided.	*Note only*
Roof Plant	The air-conditioning is via a chilled water system provided by one (1) York air-cooled chiller in the roof plant area, the chillers are approximately 3 years old, and in good condition and operate on R134A. Pumps located adjacent the chiller plant distribute the CHW to the FCUs throughout the building. Pumps are in good condition. Two Energy Products Air Handling Units (AHU) on the roof distributes filtered outdoor air to the floors via the riser. They also include a return air / spill air heat recovery system and economiser. The units appear to be in good condition; however, one has a damaged panel which may become vulnerable to rust. We recommend this be repaired	Good Good Good

Plant/Equipment:	Description:	Condition (refer section 2.10):
	and treated to maximise economic life. The AHUs are provided with 8 VRF units to pre-heat and pre-cool the outdoor air. They are in good condition. In addition to the VRF plant serving the AHUs, there are 4 dry cooler condenser units located on top of the AHUs. It is unclear what these are for, but they appear to serve the AHUs, and they are not shown on the design drawings reviewed. The units are in good condition and operate on R410A. There are 3 MHI split system outdoor units located in the roof plant area. These serve under ceiling cassettes in the comms cupboards and are in good condition. There are 4 miscellaneous ventilation fans located on the roof that serve the rubbish room and general office areas. They are in good condition. There is a roof cowl for the lift shaft vent. The Mechanical services switchboard (MSSB), VSDs and controls are located on the roof level and are in good condition.	Good Good Good Good Good Good
On floor air conditioning plant	The building is served by exposed ducted Fan Coil Units to provide zone control to the floors. Heating is provided via electric heaters in the FCU. The FCUs are in good operating condition. The ground floor comprises of 3 vacant tenancies. They are provided with ventilation openings in the building façade for future fit out.	Good Good
Electric Heaters	Electric heaters are provided to the reception and kitchenette areas to provide supplementary heating.	Good
Miscellaneous fans including: • Toilet extract fan • General extract systems • Rubbish room extract	The toilets, rubbish room and 3 general office extract systems on each level are provided with extract ventilation via a central exhaust system that discharges to a roof fan at the roof plant area; Based on the visual inspection, there is no apparent damage and all fans are operational, and in good condition.	Good
Ductwork and grilles	Exposed duct work appears to be in good condition. We recommend all external ductwork is regularly maintained, cleaned and painted to maximise economic life. Plenum boxes are supported properly with seismic restraints and provided with acoustic insulation Internal ductwork surfaces could not be observed at the time of inspection. It is recommended that the mechanical maintenance contractor investigate internal ductwork surfaces to assess whether they are clean. Supply and return grilles in tenancies are in good condition.	Good Good Good Good

Plant/Equipment:	Description:	Condition (refer section 2.10):
Air-conditioning pipework.	Chilled water pumps, pipework and ancillaries all appeared to be in good condition. There has been a mechanical valve leak reported on level 2, which had been repaired at the time of visit. This was likely due to faulty product or workmanship rather than an operational issue; however, we recommend the chilled water system continue to be monitored for leaks and logged as required. Roof mounted exposed pipework in the roof plant area is clad and weather protected. Refrigerant pipe lagging to the outdoor units at the roof plant level had no UV protection and has already started to fail. We recommend this be repaired and protected to maximise efficient operation and economic life.	Good Note Good Good
Comms room AC	Under ceiling cassette air conditioning units are provided for comms room cooling and are fitted with condensate pumps. AC units are controlled via local wall mounted controllers, which appeared in good condition.	Good
Mechanical Services Electrical and Controls	The Mechanical services switchboard (MSSB), VSDs, controllers and on floor controllers seen at the time of visit were all in good condition. The building is provided with a Delta (Direct Controls) BMS and VSDs. No BMS PC was seen on site at the time of visit. We have assumed the BMS is accessed remotely.	Good Good
Fire Penetrations	It is recommended that fire seal requirements to services penetrations at walls, ceiling and floor are reviewed against the fire engineer's report and are provided as and if required to maintain fire ratings.	For further investigation

6.3 Code Compliance

We did not find any code compliance issues with the existing installation:

Note that Agile Engineering were not engaged to perform airflow testing/measurements of ventilation systems, however based on the inspection and the information provided we do not see any reason as to why compliant flow rates would not be achieved.

6.4 Recommendations

We recommend the following: -

a) Replace exposed refrigerant pipework insulation and protect from UV.

b) New systems (ground floor tenant fit out) should include appropriate seismic restraints.

c) Perform a passive fire review of all mechanical penetrations at fire rated partitions.

d) Continue routine maintenance, testing and cleaning of plant, ducts and grilles as required.

e) Repair damaged AHU panel as necessary.

f) Confirm purpose for dry cooler condenser units located on top of AHUs.

6.5 CAPEX Budget Assessment

Refer to Appendix B for the Mechanical Services CAPEX budget schedule.

SECTION 7 LIFT SERVICES

7.1 Passenger Lifts Description

There are three number lifts located in the central core. All three lifts are to the same specifications, details are as tabled below:

Lift Description:	Passenger lift 1 / 2 / 3
Lift Manufacturer:	Schindler
Lift Maintenance Contractor:	Schindler
Installation date:	2016
Capacity:	1150kg / 16 Person
Floors Served:	5 (Ground + 4)
Speed:	1.0 m/s
Door Type & Width:	Two panel centre opening / 500mm
Door Size	1000mm

Lift were in good operational condition at the time of visit and runs smoothly. Stops are level at landings and doors open smoothly.

7.2 Code Compliance

We have found the following code compliance issues with the existing installation:

a) No lock off tags at the main switch to allow the equipment to be safely worked on.

b) There were no floor numerals at each landing as required by NZS 4121

7.3 Recommendations

We noted the following items to be considered for the passenger lifts. We understand that these components will be covered under the terms of the Comprehensive Maintenance Contract that is currently in place.

a) Fully test lift operation including lift alarm button, and lift phone button.

b) Provide floor numerals on each landing entrance.

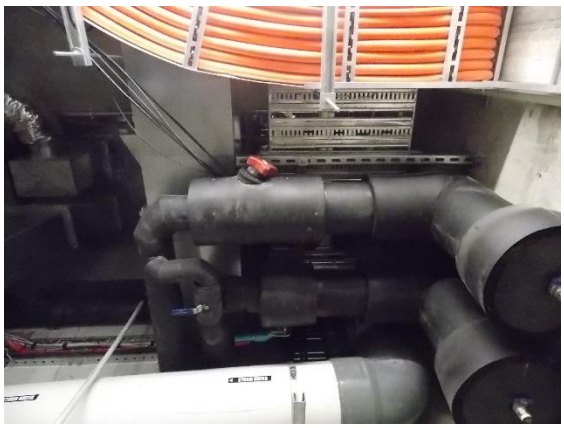
c) Provide lock off tags to the main switch to allow the equipment to be safely worked on.

7.4 CAPEX Budget Assessment

Refer to Appendix B for the Lift Services CAPEX budget schedule.

APPENDIX A: SITE PHOTOS

E1 – Unsupported cabling in MSB Room



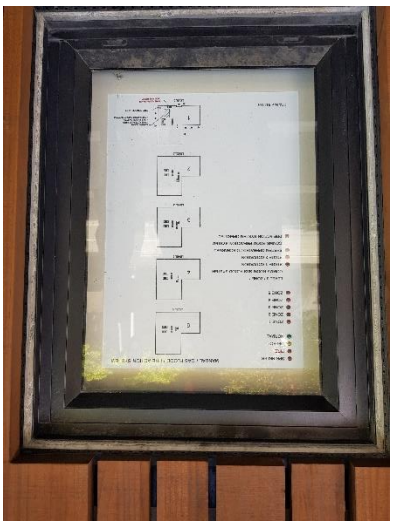
E2 – Unsupported cabling in MSB Room

E3 – Unsupported cabling in riser

E4 – Non-compliant spacing between hanger and cable ladder

E5 – Aluminium lining above generator coming off

E6 –No grommet to cable from raised floor



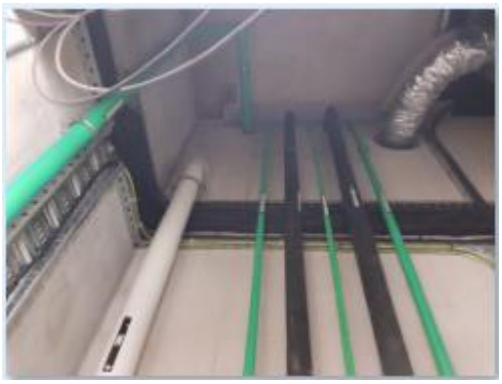
F1 – Fire Alarm Panel

F2 – Sprinkler valve

F3 – Fire extinguisher (tested May 19)

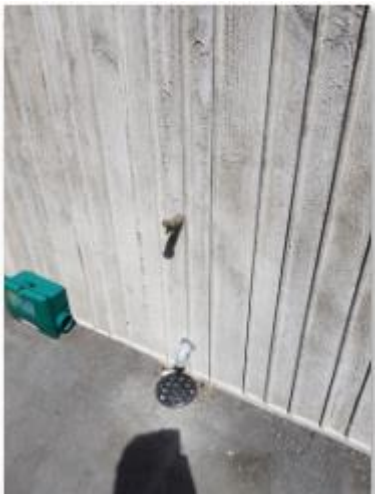
H1 – Booster pump set

H2 – Water meters



H3 – Plumbing riser

H4 – Domestic hot water heaters



H5 – ORG and Exterior tap with no backflow preventor

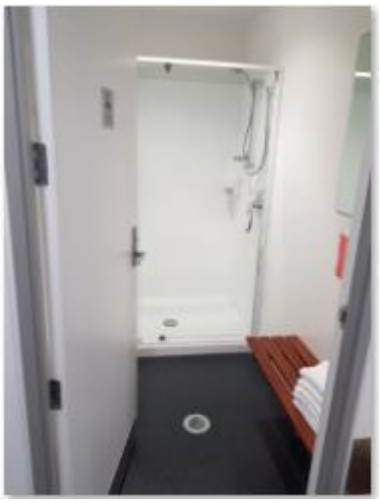
H6 – Main back flow prevention valves

H7 – Tenant gas meter provisions

H8 – Typical unisex bathroom

H9 – Typical Kitchenette

H10 – Zenith hot water unit



H11 – Typical unisex Shower

M1 –HVAC Risers (looking up from GF)

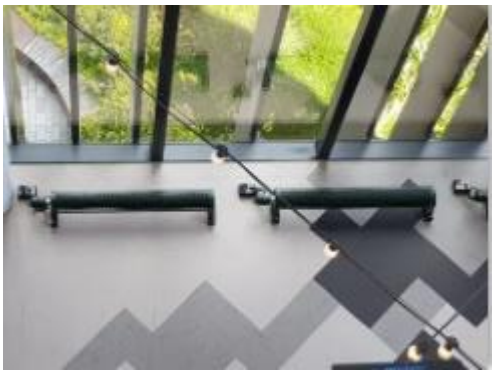
M2 – Electric heaters at reception

M3 – Tenant provision (louvre at façade)

M4 – Typical exposed supply duct and Grille

M5 – Under ceiling split unit in comms room, c/w safety tray and condensate pump.

M6 – Typical wall controllers (comms room)



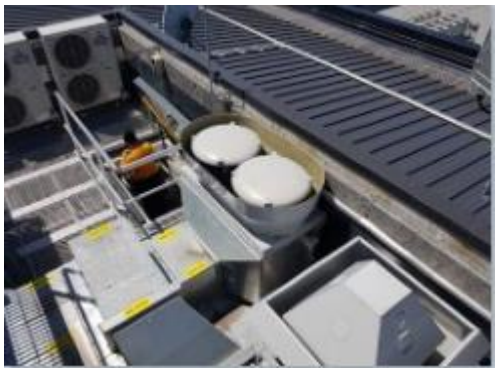
M7 – Electric Heater (lunch room)

M8 – Return air grilles (atrium)

M9 – HVAC Controller

M10 – Typical FCU

M11 – Typical supply grille



M12 – Roof Fans

M13 –Damaged AHU Panel

M14 – HVAC switch board

M15 – HVAC Roof mounted VSDs

M16 – AHU VRF Outdoor Unit on Roof

M17 – Chilled water pumps and pipe work on Roof

M18 – Chiller Unit on Roof

M19 –HVAC Dry cooler on top of AHU

M20 –DX refrigerant pipework on Roof in need of repair and UV protection.

APPENDIX B: BUILDING SERVICES CAPEX BUDGET SCHDULE

Project: **Vodafone Innov8 Christchurch**

Project No. **B010328**

Description: **BUILDING SERVICES HIGH LEVEL CAPEX BUDGET SCHEDULE**

Notes:
(1) Budget costs noted below are estimates only and a Quantity Surveyor should be engaged to provide an assessment if more accurate pricing is required.
(2) OPEX costs for regular maintenance requirements are not included in the schedule below;
(3) Budget Costs exclude contractors margin, consultant fees, P&G, scaffolding, contingencies and inflation adjustments

	DESCRIPTION		CURRENT ESTIMATED AGE (years)	ECONOMIC LIFE (years)	REQUIREMENT	YEAR 0 (2020)	YEAR 1 (2021)	YEAR 2 (2022)	YEAR 3 (2023)	YEAR 4 (2024)	YEAR 5 (2025)	YEAR 6 (2026)	YEAR 7 (2027)	YEAR 8 (2028)	YEAR 9 (2029)	YEAR 10 (2030)
1.0	**MECHANICAL SERVICES**															
	Chiller	1.01	3	20	Carry out programmed preventive maintenance to maximise economic life. No replacement required in 10 year plan.											
	Pumps	1.02	3	20	Carry out programmed preventive maintenance to maximise economic life. No replacement required in 10 year plan.											
	AHUs	1.03	3	20	Repair existing panel. Carry out programmed preventive maintenance to maximise economic life. No replacement required in 10 year plan.	$ 500										
	AHU VRF Units	1.04	3	15	Carry out programmed preventive maintenance to maximise economic life. No replacement required in 10 year plan.											
	Condenser / Dry cooler units	1.05	3	15	Carry out programmed preventive maintenance to maximise economic life. No replacement required in 10 year plan. Contractor to update O&M and as-built plans as required.	$ 1,000										
	Comms Room DX Split Units	1.06	3	15	Carry out programmed preventive maintenance to maximise economic life. Condensate pump replacement assumed year 7.								$ 6,000			
	FCUs	1.07	3	20	Carry out programmed preventive maintenance to maximise economic life. No replacement required in 10 year plan.											
	Miscellaneous Ventilation Fans	1.08	3	20	Carry out programmed preventive maintenance to maximise economic life. No replacement required in 10 year plan.											
	Toilet extract Ventilation	1.09	3	20	Carry out programmed preventive maintenance to maximise economic life. No replacement required in 10 year plan.											
	Electric heaters	1.10	3	8	Carry out programmed preventive maintenance to maximise economic life. Replacement assumed year 5.						$ 4,000					
	Ductwork and fittings	1.11	3	30	Carry out programmed preventive maintenance and cleaning to maximise economic life. No replacement required in 10 year plan.											
	Grilles and Diffusers	1.12	3	25	Carry out programmed preventive maintenance and cleaning to maximise economic life. No replacement required in 10 year plan.											

Project: **Vodafone Innov8 Christchurch**

Project No. **B010328**

Description: **BUILDING SERVICES HIGH LEVEL CAPEX BUDGET SCHEDULE**

Notes:
(1) Budget costs noted below are estimates only and a Quantity Surveyor should be engaged to provide an assessment if more accurate pricing is required.
(2) OPEX costs for regular maintenance requirements are not included in the schedule below;
(3) Budget Costs exclude contractors margin, consultant fees, P&G, scaffolding, contingencies and inflation adjustments

	DESCRIPTION		CURRENT ESTIMATED AGE (years)	ECONOMIC LIFE (years)	REQUIREMENT	YEAR 0 (2020)	YEAR 1 (2021)	YEAR 2 (2022)	YEAR 3 (2023)	YEAR 4 (2024)	YEAR 5 (2025)	YEAR 6 (2026)	YEAR 7 (2027)	YEAR 8 (2028)	YEAR 9 (2029)	YEAR 10 (2030)
	Pipework	1.13	3	30	Repair and UV-protect external refrigeration pipes. Carry out programmed preventive maintenance to maximise economic life. No replacement required in 10 year plan.	$ 1,500										
	Mechanical Services Switchboard	1.14	3	15 to 20	Carry out programmed preventive maintenance and cleaning to maximise economic life. No replacement required in 10 year plan.											
	Mechanical Services Switchboard	1.15	3	15 to 20	Thermal scans and report. Thermal scans are to be carried out every year to ensure that any thermal hot spots are detected early and can therefore be rectified without causing site outage.	$ 1,000	$ 1,000	$ 1,000	$ 1,000	$ 1,000	$ 1,000	$ 1,000	$ 1,000	$ 1,000	$ 1,000	$ 1,000
	BMS and Controls	1.16	3	10	Carry out programmed preventive maintenance to maximise economic life. Replacement of sensors, software and controllers assumed year 8.									$ 200,000		
	Fire Sealing	1.17	-	-	Review fire sealing which is required to be provided for all penetrations between separate fire cells. Contractor to carry out a detailed site survey and provide fire sealing wherever necessary. Due diligence checks are to be carried out annually to ensure effectiveness of fire seals. PC sum allowed for year 0.	$ 3,000	$ 800	$ 800	$ 800	$ 800	$ 800	$ 800	$ 800	$ 800	$ 800	$ 800
					Sub Total	**$ 7,000**	**$ 1,800**	**$ 1,800**	**$ 1,800**	**$ 1,800**	**$ 5,800**	**$ 1,800**	**$ 7,800**	**$ 201,800**	**$ 1,800**	**$ 1,800**
2.0	**ELECTRICAL SERVICES**															
	Main Switchboard	2.01	3	20-25	Thermal scans and report. Thermal scans are to be carried out every year to ensure that any thermal hot spots are detected early and can therefore be rectified without causing site outage.	$ 1,000	$ 1,000	$ 1,000	$ 1,000	$ 1,000	$ 1,000	$ 1,000	$ 1,000	$ 1,000	$ 1,000	$ 1,000
	Main Switchboard	2.02	3	20-25	Carry out programmed preventive maintenance to maximise economic life. No replacement required in 10 year plan.											
	Main Switchboard	2.03	3	20-25	Provision of a single line diagram drawing of the MSB at the switchboard.	$ 1,500										
	Diesel generator	2.04	3	20-25	Replacement of generator controls. Not required in 10 year plan.											
	Diesel generator room	2.05	3	N/A	The aluminium lining to the generator room wall and ceilings be made good with appropriate fixings/clips.	$ 1,000										

Project: **Vodafone Innov8 Christchurch**

Project No. **B010328**

Description: **BUILDING SERVICES HIGH LEVEL CAPEX BUDGET SCHEDULE**

Notes:
(1) Budget costs noted below are estimates only and a Quantity Surveyor should be engaged to provide an assessment if more accurate pricing is required.
(2) OPEX costs for regular maintenance requirements are not included in the schedule below;
(3) Budget Costs exclude contractors margin, consultant fees, P&G, scaffolding, contingencies and inflation adjustments

	DESCRIPTION		CURRENT ESTIMATED AGE (years)	ECONOMIC LIFE (years)	REQUIREMENT	YEAR 0 (2020)	YEAR 1 (2021)	YEAR 2 (2022)	YEAR 3 (2023)	YEAR 4 (2024)	YEAR 5 (2025)	YEAR 6 (2026)	YEAR 7 (2027)	YEAR 8 (2028)	YEAR 9 (2029)	YEAR 10 (2030)
	All Distribution Boards (DBs)	2.06	3	20-25	Thermal scans and report. Thermal scans are to be carried out every year to ensure that any thermal hot spots are detected early and can therefore be rectified without causing site outage.	$ 1,500	$ 1,500	$ 1,500	$ 1,500	$ 1,500	$ 1,500	$ 1,500	$ 1,500	$ 1,500	$ 1,500	$ 1,500
	Power and earthing cabling	2.07	3	30 to 50 depending on maintenance	Existing mains cabling and earth connections are to be tested for functionality. This should be carried out every 3 years.	$ 1,500			$ 1,500			$ 1,500			$ 1,500	
	Power and earthing cabling	2.08	3	30 to 50 depending on maintenance	Make good all loose runs of cable and support on cable trays / containment.	$ 2,000										
	Interior Lighting	2.09	3	15	Carry out programmed preventive maintenance to maximise economic life. No replacement required in 10 year plan.											
	Staircase and plant room lighting (fluorescent)	2.10	3	15	Carry out programmed preventive maintenance to maximise economic life. Relamp every 8 years starting year 5.						$ 2,000					
	Exterior lighting	2.11	3	12 to 15	Carry out programmed preventive maintenance to maximise economic life. No replacement required in 10 year plan.											
	Exit/emergency lighting	2.12	3	10 to 15	Carry out programmed testing and preventive maintenance to maximise economic life.											
	Emergency Lighting	2.13	3	10 to 15	Provide new emergency lighting at the end of its functional life. No replacement required in 10 year plan.											
	Emergency Lighting	2.13	3	N/A	An exit/emergency lighting test logbook should be provided on site in accordance with AS/NZS 2293.1.	$ 500										
	Emergency Lighting batteries	2.14	3	5	Replacement of exit / emergency lighting batteries at the end of their economic life.			$ 6,500					$ 6,500			
	Access control system	2.15	3	15	Carry out programmed preventive maintenance to maximise economic life. No replacement required in 10 year plan.											
	CCTV surveillance system	2.16	3	15	Carry out programmed preventive maintenance to maximise economic life. No replacement required in 10 year plan.											
	Fire Sealing	2.18	-	-	Review fire sealing which is required to be provided for all penetrations between separate fire cells. Contractor to carry out a detailed site survey and provide fire sealing wherever necessary. Due diligence checks are to be carried out annually to ensure effectiveness of fire seals. PC sum allowed for year 0.	$ 3,000	$ 800	$ 800	$ 800	$ 800	$ 800	$ 800	$ 800	$ 800	$ 800	$ 800

Project: **Vodafone Innov8 Christchurch**

Project No. **B010328**

Description: **BUILDING SERVICES HIGH LEVEL CAPEX BUDGET SCHEDULE**

Notes:
(1) Budget costs noted below are estimates only and a Quantity Surveyor should be engaged to provide an assessment if more accurate pricing is required.
(2) OPEX costs for regular maintenance requirements are not included in the schedule below;
(3) Budget Costs exclude contractors margin, consultant fees, P&G, scaffolding, contingencies and inflation adjustments

	DESCRIPTION		CURRENT ESTIMATED AGE (years)	ECONOMIC LIFE (years)	REQUIREMENT	YEAR 0 (2020)	YEAR 1 (2021)	YEAR 2 (2022)	YEAR 3 (2023)	YEAR 4 (2024)	YEAR 5 (2025)	YEAR 6 (2026)	YEAR 7 (2027)	YEAR 8 (2028)	YEAR 9 (2029)	YEAR 10 (2030)
					Sub Total	**$ 12,000**	**$ 3,300**	**$ 9,800**	**$ 4,800**	**$ 3,300**	**$ 5,300**	**$ 4,800**	**$ 9,800**	**$ 3,300**	**$ 4,800**	**$ 3,300**
3.0	**HYDRAULIC SERVICES**															
	Domestic cold-water	3.01	3	30+	Provide backflow flow devices for external hose taps.	$ 500										
	DCW Booster pumps	3.02	3	15	Carry out programmed preventive maintenance and cleaning to maximise economic life. No replacement required in 10 year plan.											
	Electric Hot water Storage Heaters	3.03	3	20+	Carry out programmed preventive maintenance and cleaning to maximise economic life. No replacement required in 10 year plan.											
	DCW and DHW Pulse Meters	3.04	3	15 to 20	Carry out programmed preventive maintenance and cleaning to maximise economic life. No replacement required in 10 year plan.											
	Sanitary Drainage	3.05	3	30+	Carry out programmed preventive maintenance and cleaning to maximise economic life. No replacement required in 10 year plan.											
	Plumbing Pipework and fittings	3.06	3	30+	Carry out programmed preventive maintenance and cleaning to maximise economic life. No replacement required in 10 year plan.	$ 1,000										
	Fixtures and fittings	3.07	3	25	Carry out programmed preventive maintenance and cleaning to maximise economic life. No replacement required in 10 year plan.											
	Fire Sealing	3.08	-	-	Fire sealing is to be provided for all cable penetrations between separate fire cells. Contractor to carry out a detailed site survey and provide fire sealing wherever necessary. Due diligence checks are to be carried out annually to ensure effectiveness of all fire seals.	$ 2,000										
					Sub Total	**$ 3,500**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
4.0	**FIRE PROTECTION SERVICES**															
	Fire alarms panel	4.01	3	15	The functionality of the existing main fire alarm panel and brigade connections are to be tested by a 3rd party.	$ 800	$ 800	$ 800	$ 800	$ 800	$ 800	$ 800	$ 800	$ 800	$ 800	$ 800
	Fire alarms system	4.02	3	15	Allowance to replace fire alarm devices as they fail.	$ 500	$ 500	$ 500	$ 500	$ 500	$ 500	$ 500	$ 500	$ 500	$ 500	$ 500
	Fire trip signals	4.03	3	N/A	Functionality of existing fire alarm interfaces with mechanical systems should be tested. Tests are to be carried out annually to ensure that the fire alarm trips are functional.	$ 250	$ 250	$ 250	$ 250	$ 250	$ 250	$ 250	$ 250	$ 250	$ 250	$ 250

Project: **Vodafone Innov8 Christchurch**

Project No. **B010328**

Description: **BUILDING SERVICES HIGH LEVEL CAPEX BUDGET SCHEDULE**

Notes:
(1) Budget costs noted below are estimates only and a Quantity Surveyor should be engaged to provide an assessment if more accurate pricing is required.
(2) OPEX costs for regular maintenance requirements are not included in the schedule below;
(3) Budget Costs exclude contractors margin, consultant fees, P&G, scaffolding, contingencies and inflation adjustments

	DESCRIPTION		CURRENT ESTIMATED AGE (years)	ECONOMIC LIFE (years)	REQUIREMENT	YEAR 0 (2020)	YEAR 1 (2021)	YEAR 2 (2022)	YEAR 3 (2023)	YEAR 4 (2024)	YEAR 5 (2025)	YEAR 6 (2026)	YEAR 7 (2027)	YEAR 8 (2028)	YEAR 9 (2029)	YEAR 10 (2030)
	Fire extinguishers	4.04	3	3	Continue testing and replacement of expired fire extinguishers											
	Sprinkler Valve Sets	4.05	3	3	Replace sprinkler valve sets every 3 years		$ 15,000				$ 15,000				$ 15,000	
	Fire Sealing	4.06	-	-	Fire sealing is to be provided for all cable penetrations between separate fire cells. Contractor to carry out a detailed site survey and provide fire sealing wherever necessary. Due diligence checks are to be carried out annually to ensure effectiveness of all fire seals.	$ 1,500	$ 500	$ 500	$ 500	$ 500	$ 500	$ 500	$ 500	$ 500	$ 500	$ 500
	Heat/smoke detectors	4.07	3	10	Conduct regular tests and calibration as per fire report and equipment manufacturer recommendations											
					Sub Total	**$ 3,050**	**$ 17,050**	**$ 2,050**	**$ 2,050**	**$ 2,050**	**$ 17,050**	**$ 2,050**	**$ 2,050**	**$ 2,050**	**$ 17,050**	**$ 2,050**
5.0	**LIFT SERVICES**															
	Lifts	5.01	3	20	Replacement of lifts at end of functional life. Not required with 10 year CAPEX.											
	Floor numerals	5.02	N/A	N/A	Provision of floor numerals to indicate floor level for compliance with standards	$ 2,000										
	Lock off tags	5.03	N/A	N/A	Provision of lock off tags to allow for safe work on lifts	$ 600										
	Lift tests	5.04	3	20	Carry out a full test of lift operation including alarms and dial-outs	$ 2,000			$ 2,000				$ 2,000			
	Lift maintenance	5.05	N/A	N/A	Continue with comprehensive maintenance to maximise functional life.											
					Sub Total	**$ 4,600**	**$ -**	**$ -**	**$ 2,000**	**$ -**	**$ -**	**$ -**	**$ 2,000**	**$ -**	**$ -**	**$ -**
	TOTAL					**$ 30,150**	**$ 22,150**	**$ 13,650**	**$ 10,650**	**$ 7,150**	**$ 28,150**	**$ 8,650**	**$ 21,650**	**$ 207,150**	**$ 23,650**	**$ 7,150**

Rebbeck
Dunn
Watters

APPENDIX II

PLANNED MAINTENANCE SCHEDULE

Forward Maintenance Plan

Item	Element / Location	Inspection comments	Action required	H&S Item (X) Compliance (C)		Current Cost (Ex GST)	Year 0	1	2	3	4	5	6	7	8	9	10
	213 - 221 Tuam Street																
	ROOFS																
1	**Main Roof**																
1.1	Roof	Composite metal roof sections noted to be well specified and installed - in addition, no evidence of water ingress was noted internally.	Sheets will be 15 years old in Year 10. In order to extend life of sheets it is recommended that the sheets are painted in Year 10.			$ 52,500											$ 52,500
1.2	Roof	Sections between composite panels noted to have resulted in metal sheets in direct contact with metal sheets. This can increase rate of corrosion due to differential thermal movement and the build up of dirt.	Ensure joints are monitored periodically and that the roof sheets are kept clean with annual washing. Allow to treat and painted as required in year 5.			$ 10,000					$ 10,000						
1.3	Roof	Impact damage noted to flashings in localised areas.	Minimise people accessing roof sheets to extend life and reduce damage. The plan is situated in a central plant area and the requirement to access the sheets should be minimal.			TBC											
1.4	Roof	Dek-tite flashings utilised.	Dek-tite flashings are reliant on silicone for watertightness and will fail over time. Allow to backflash in Year 10.			$ 6,000											$ 6,000
1.5	Roof	Timber boards placed above perimeter guttering.	Timber boards could not be accessed during inspection however it is believed that they are held down by their own weight. Periodically monitor boards particularly after strong winds to ensure the boards have not shifted. An allowance should be made to replace the boards in Year 10.			$ 14,000											$ 14,000
1.6	Roof	Plant area platforms appear well specified and installed.	No action likely to be required within 10 year period.			$ -											
1.7	Roof	Insulation boards to plant area appear well specified and installed. Insulation boards are brittle and impact will cause damage.	Allow sum to replace damaged boards in Year 10.			$ 5,000											$ 5,000
1.8	Roof	Roof access ladder from plant area to roof sheets requires foot contact with metal flashing on concrete upstand. This will deteriorate flashing over time.	Consider installation of step cover over and above metal flashing.			$ 1,500		$ 1,500									
2	**Fire Escape Staircases**																
2.1	Balustrades	Multiple areas of >100mm gaps noted through balustrades. A maximum of 100mm is allowed under Building Code.	The building is understood to have gained CCC - however, in terms of best practice and to minimise risk of children falling between gaps in balustrades, it is recommended that addition spindles are welded in place and that the voids in the concrete floors are closed over.		X	$ 20,000		$ 20,000									
2.2	Balustrades	The Acceptable Solution F4/AS1 requires barrier heights in buildings other than housing to be 900mm on stairs and ramps, and 1100mm elsewhere. Balustrade heights on landings are below 1100mm in height. CCC is thought to have been issued and therefore the handrails have been accepted by Council.	In line with best practice - consider increasing height of handrails to 1,100mm on landings.			TBC											
2.3	Concrete Walls/Floors	Minor cracking noted to concrete.	Cracking is likely to be shrinkage - monitor cracking and consult an engineer in the event of additional cracking opening up.			TBC											
3	**Plant Rooms**																
3.1	Finishes	Entry doors will require periodic repainting.	Allow sum to paint in year 10.			$ 4,000									$ 4,000		
3.2	Concrete Walls/Floors	Minor cracking noted to concrete.	Cracking is likely to be shrinkage - monitor cracking and consult an engineer in the event of additional cracking opening up.			TBC											

Item	Element / Location	Inspection comments	Action required	H&S Item (X)	Compliance (C)	Current Cost (Ex GST)	Year 0	1	2	3	4	5	6	7	8	9	10
4	**Office Areas**	*Note: For the purposes of this PPM, maintenance of Tenanted areas are considered recoverable from the Tenant and this has been excluded unless specifically stated.*															
4.1	Floors	The raised floor system is liable to wear over a 10 year period.	Make an allowance to overhaul in Year 10.			$ 15,000											$ 15,000
5	**Bathrooms**																
5.1	All Bathrooms	Bathrooms were noted to be in a serviceable condition and are unlikely to require refurbishment within 10 year period. Maintenance believed to be a Tenant responsibility.	No action required.			$ -											
6	**External Elevations**																
6.1	Curtain Wall System	The curtain wall system is in a serviceable condition and appears well specified and maintained.	No action required. Glazing seals under the Building Code are required to last 15 years (Year 10) however in practice, they are likely to last longer. Allow to recheck seals in Year 10.			TBC											
6.2	Concrete Panels	Precast concrete panels are in a serviceable condition.	No action required.			$ -											
6.3	Concrete Panels	Ground floor texted concrete render appears to have come free in localised areas.	We could not determine if this effect is deliberate or if small sections have come free in the past, either through workmanship or impact damage. The render sections would be lightweight and would pose minimal risk, however they should be checked to ensure they are not loose.			$ 2,500		$ 2,500									
6.4	Louvres	Aluminium louvres noted to be in a serviceable condition.	No action likely to be required over 10 year period.			$ -											
6.5	Doors	Works were being undertaken to the main entrance door during inspection.	Ensure works are completed and door is functional.			TBC											
6.6	Doors	Sliding doors noted to be in a serviceable condition.	Ensure stones/pebbles from nearby carpark and feature areas do not enter into the sliding door tracks. Stones were noted during inspection and these will damage the runners if the door is opened over and above.			Note											
6.7	Doors	Painted entrance doors will require repainting within 10 years.	Allow to repaint.			$ 4,000									$ 4,000		
6.8	Canopy	Metal frame to canopy is noted to be corroding in localised areas.	Allow to treat corrosion and repaint metal canopy.			$ 3,500		$ 3,500									
6.9	Canopy	Stained timber soffits will require restaining within 10 years.	Allow to restain.			$ 5,880						$ 5,880					
6.10	Timber Louvres	Timber louvres will require restaining within 10 years.	Allow to restain.			$ 4,000						$ 4,000					
6.11	Timber Cladding	Stained timber cladding will require restaining within 10 years.	Allow to restain.			$ 3,000						$ 3,000					
7	**Grounds**																
7.1	Drains	Aco-Drains to yards appear to be well specified and maintained.	Allow sum to periodically take up covers and wash out.			$ 4,000				$ 2,000						$ 2,000	
7.2	Landscaping	Landscaping will be undertaken in line with OPEX.	Ensure landscaping is undertaken.			OPEX											

Item	Element / Location	Inspection comments	Action required	H&S Item (X)	Compliance (C)	Current Cost (Ex GST)	Year 0	1	2	3	4	5	6	7	8	9	10
7.3	Gas Supply	A live gas supply has been provided externally to the west of the building. This is believed to be to enable cooing equipment externally - however, the supply comes up from a footpath/road.	Install bollards to protect gas supply.			$ 2,500		$ 2,500									
7.4	Lighting Poles	Light poles noted to be serviceable.	No works required to structure within 10 years - lighting costs dealt with by Agile report.			$ -											
8	**Mechanical Services**																
8.1	Chiller	-	Carry out programmed preventive maintenance to maximise economic life. No replacement required in 10 year plan.			$ -											
8.2	Pumps	-	Carry out programmed preventive maintenance to maximise economic life. No replacement required in 10 year plan.			$ -											
8.3	AHUs	-	Repair existing panel. Carry out programmed preventive maintenance to maximise economic life. No replacement required in 10 year plan.			$ 500	$ 500										
8.4	AHU VRF Units	-	Carry out programmed preventive maintenance to maximise economic life. No replacement required in 10 year plan.			$ -											
8.5	Condenser / Dry cooler units	-	Carry out programmed preventive maintenance to maximise economic life. No replacement required in 10 year plan. Contractor to update O&M and as-built plans as required.			$ 1,000	$ 1,000										
8.6	Comms Room DX Split Units	-	Carry out programmed preventive maintenance to maximise economic life. Condensate pump replacement assumed year 7.			$ 6,000								$ 6,000			
8.7	FCUs	-	Carry out programmed preventive maintenance to maximise economic life. No replacement required in 10 year plan.			$ -											
8.8	Miscellaneous Ventilation Fans	-	Carry out programmed preventive maintenance to maximise economic life. No replacement required in 10 year plan.			$ -											
8.9	Toilet extract Ventilation	-	Carry out programmed preventive maintenance to maximise economic life. No replacement required in 10 year plan.			$ -											
8.10	Electric heaters	-	Carry out programmed preventive maintenance to maximise economic life. Replacement assumed year 5.			$ 4,000						$ 4,000					
8.11	Ductwork and fittings	-	Carry out programmed preventive maintenance and cleaning to maximise economic life. No replacement required in 10 year plan.			$ -											
8.12	Grilles and Diffusers	-	Carry out programmed preventive maintenance and cleaning to maximise economic life. No replacement required in 10 year plan.			$ -											
8.13	Pipework	-	Repair and UV-protect external refrigeration pipes. Carry out programmed preventive maintenance to maximise economic life. No replacement required in 10 year plan.			$ 1,500	$ 1,500										
8.14	Mechanical Services Switchboard	-	Carry out programmed preventive maintenance and cleaning to maximise economic life. No replacement required in 10 year plan.			$ -											
8.15	Mechanical Services Switchboard	-	Thermal scans and report. Thermal scans are to be carried out every year to ensure that any thermal hot spots are detected early and can therefore be rectified without causing site outage.			$ 11,000	$ 1,000	$ 1,000	$ 1,000	$ 1,000	$ 1,000	$ 1,000	$ 1,000	$ 1,000	$ 1,000	$ 1,000	$ 1,000
8.16	BMS and Controls	-	Carry out programmed preventive maintenance to maximise economic life. Replacement of sensors, software and controllers assumed year 8.			$ 200,000									$ 200,000		
8.17	Fire Sealing	-	Review fire sealing which is required to be provided for all penetrations between separate fire cells. Contractor to carry out a detailed site survey and provide fire sealing wherever necessary. Due diligence checks are to be carried out annually to ensure effectiveness of fire seals. PC sum allowed for year 0.			$ 11,000	$ 3,000	$ 800	$ 800	$ 800	$ 800	$ 800	$ 800	$ 800	$ 800	$ 800	$ 800
9	**Electrical Services**																

Item	Element / Location	Inspection comments	Action required	H&S Item (X)	Compliance (C)	Current Cost (Ex GST)	Year 0	1	2	3	4	5	6	7	8	9	10
9.1	Main Switchboard	-	Thermal scans and report. Thermal scans are to be carried out every year to ensure that any thermal hot spots are detected early and can therefore be rectified without causing site outage.			$ 11,000	$ 1,000	$ 1,000	$ 1,000	$ 1,000	$ 1,000	$ 1,000	$ 1,000	$ 1,000	$ 1,000	$ 1,000	$ 1,000
9.2	Main Switchboard	-	Carry out programmed preventive maintenance to maximise economic life. No replacement required in 10 year plan.			$ -											
9.3	Main Switchboard	-	Provision of a single line diagram drawing of the MSB at the switchboard.			$ 1,500	$ 1,500										
9.4	Diesel generator	-	Replacement of generator controls. Not required in 10 year plan.			$ -											
9.5	Diesel generator room	-	The aluminium lining to the generator room wall and ceilings be made good with appropriate fixings/clips.			$ 1,000	$ 1,000										
9.6	All Distribution Boards (DBs)	-	Thermal scans and report. Thermal scans are to be carried out every year to ensure that any thermal hot spots are detected early and can therefore be rectified without causing site outage.			$ 16,500	$ 1,500	$ 1,500	$ 1,500	$ 1,500	$ 1,500	$ 1,500	$ 1,500	$ 1,500	$ 1,500	$ 1,500	$ 1,500
9.7	Power and earthing cabling	-	Existing mains cabling and earth connections are to be tested for functionality. This should be carried out every 3 years.			$ 6,000	$ 1,500			$ 1,500			$ 1,500			$ 1,500	
9.8	Power and earthing cabling	-	Make good all loose runs of cable and support on cable trays / containment.			$ 2,000	$ 2,000										
9.9	Interior Lighting	-	Carry out programmed preventive maintenance to maximise economic life. No replacement required in 10 year plan.			$ -											
9.10	Staircase and plant room lighting (fluorescent)	-	Carry out programmed preventive maintenance to maximise economic life. Relamp every 8 years starting year 5.			$ 2,000						$ 2,000					
9.11	Exterior lighting	-	Carry out programmed preventive maintenance to maximise economic life. No replacement required in 10 year plan.			$ -											
9.12	Exit/emergency lighting	-	Carry out programmed testing and preventive maintenance to maximise economic life.			$ -											
9.13	Emergency Lighting	-	Provide new emergency lighting at the end of its functional life. No replacement required in 10 year plan.			$ -											
9.14	Emergency Lighting	-	An exit/emergency lighting test logbook should be provided on site in accordance with AS/NZS 2293.1.			$ 500	$ 500										
9.15	Emergency Lighting batteries	-	Replacement of exit / emergency lighting batteries at the end of their economic life.			$ 13,000			$ 6,500					$ 6,500			
9.16	Access control system	-	Carry out programmed preventive maintenance to maximise economic life. No replacement required in 10 year plan.			$ -											
9.17	CCTV surveillance system	-	Carry out programmed preventive maintenance to maximise economic life. No replacement required in 10 year plan.			$ -											
9.18	Fire Sealing	-	Review fire sealing which is required to be provided for all penetrations between separate fire cells. Contractor to carry out a detailed site survey and provide fire sealing wherever necessary. Due diligence checks are to be carried out annually to ensure effectiveness of fire seals. PC sum allowed for year 0.			$ 11,000	$ 3,000	$ 800	$ 800	$ 800	$ 800	$ 800	$ 800	$ 800	$ 800	$ 800	$ 800
10	**Hydraulic Services**																
10.1	Domestic cold-water	-	Provide backflow flow devices for external hose taps.			$ 500	$ 500										
10.2	DCW Booster pumps	-	Carry out programmed preventive maintenance and cleaning to maximise economic life. No replacement required in 10 year plan.			$ -											
10.3	Electric Hot water Storage Heaters	-	Carry out programmed preventive maintenance and cleaning to maximise economic life. No replacement required in 10 year plan.			$ -											
10.4	DCW and DHW Pulse Meters	-	Carry out programmed preventive maintenance and cleaning to maximise economic life. No replacement required in 10 year plan.			$ -											
10.5	Sanitary Drainage	-	Carry out programmed preventive maintenance and cleaning to maximise economic life. No replacement required in 10 year plan.			$ -											
10.6	Plumbing Pipework and fittings	-	Carry out programmed preventive maintenance and cleaning to maximise economic life. No replacement required in 10 year plan.			$ 1,000	$ 1,000										
10.7	Fixtures and fittings	-	Carry out programmed preventive maintenance and cleaning to maximise economic life. No replacement required in 10 year plan.			$ -											

Item	Element / Location	Inspection comments	Action required	H&S Item (X) Compliance (C)	Current Cost (Ex GST)	Year 0	1	2	3	4	5	6	7	8	9	10
10.8	Fire Sealing	-	Fire sealing is to be provided for all cable penetrations between separate fire cells. Contractor to carry out a detailed site survey and provide fire sealing wherever necessary. Due diligence checks are to be carried out annually to ensure effectiveness of all fire seals.		$ 2,000	$ 2,000										
11	**FIRE PROTECTION SERVICES**															
11.1	Fire alarms panel	-	The functionality of the existing main fire alarm panel and brigade connections are to be tested by a 3rd party.		$ 8,800	$ 800	$ 800	$ 800	$ 800	$ 800	$ 800	$ 800	$ 800	$ 800	$ 800	$ 800
11.2	Fire alarms system	-	Allowance to replace fire alarm devices as they fail.		$ 5,500	$ 500	$ 500	$ 500	$ 500	$ 500	$ 500	$ 500	$ 500	$ 500	$ 500	$ 500
11.3	Fire trip signals	-	Functionality of existing fire alarm interfaces with mechanical systems should be tested. Tests are to be carried out annually to ensure that the fire alarm trips are functional.		$ 2,750	$ 250	$ 250	$ 250	$ 250	$ 250	$ 250	$ 250	$ 250	$ 250	$ 250	$ 250
11.4	Fire extinguishers	-	Continue testing and replacement of expired fire extinguishers		$ -											
11.5	Sprinkler Valve Sets	-	Replace sprinkler valve sets every 3 years		$ 45,000		$ 15,000				$ 15,000				$ 15,000	
11.6	Fire Sealing	-	Fire sealing is to be provided for all cable penetrations between separate fire cells. Contractor to carry out a detailed site survey and provide fire sealing wherever necessary. Due diligence checks are to be carried out annually to ensure effectiveness of all fire seals.		$ 6,500	$ 1,500	$ 500	$ 500	$ 500	$ 500	$ 500	$ 500	$ 500	$ 500	$ 500	$ 500
11.7	Heat/smoke detectors	-	Conduct regular tests and calibration as per fire report and equipment manufacturer recommendations		$ -											
12	**Lift Services**															
12.1	Lifts	-	Replacement of lifts at end of functional life. Not required with 10 year CAPEX.		$ -											
12.2	Floor numerals	-	Provision of floor numerals to indicate floor level for compliance with standards		$ 2,000	$ 2,000										
12.3	Lock off tags	-	Provision of lock off tags to allow for safe work on lifts		$ 600	$ 600										
12.4	Lift tests	-	Carry out a full test of lift operation including alarms and dial-outs		$ 6,000	$ 2,000			$ 2,000				$ 2,000			
12.5	Lift maintenance	-	Continue with comprehensive maintenance to maximise functional life.		$ -											
	Total				**$ 537,530**	**$ 30,150**	**$ 52,150**	**$ 13,650**	**$ 10,650**	**$ 9,150**	**$ 51,030**	**$ 8,650**	**$ 21,650**	**$ 215,150**	**$ 25,650**	**$ 99,650**

Cost Summary	Priority														
	Contractors Overheads & Profit	10.0%	$ 53,753	$ 3,015	$ 5,215	$ 1,365	$ 1,065	$ 915	$ 5,103	$ 865	$ 2,165	$ 21,515	$ 2,565	$ 9,965
	Professional Fees	9.0%	$ 48,378	$ 2,714	$ 4,694	$ 1,229	$ 959	$ 824	$ 4,593	$ 779	$ 1,949	$ 19,364	$ 2,309	$ 8,969
	TOTAL EXCLUDING GST		**$ 639,661**	**$ 35,879**	**$ 62,059**	**$ 16,244**	**$ 12,674**	**$ 10,889**	**$ 60,726**	**$ 10,294**	**$ 25,764**	**$ 256,029**	**$ 30,524**	**$ 118,584**

Rebbeck Dunn Watters

APPENDIX III

PHOTOGRAPHS

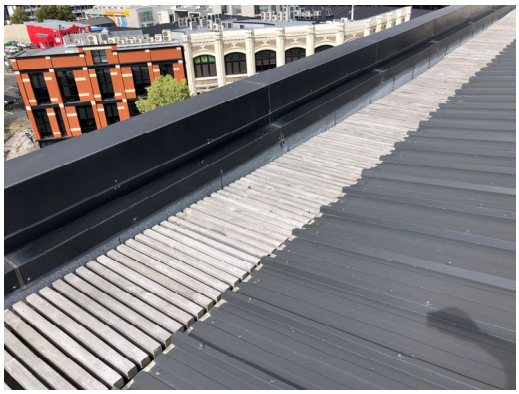
General Photographs

1.1. General view of roof areas

1.2. General view of roof areas

1.3. General view of roof areas

1.4. General view of roof areas



1.5. Timber walking boards to perimeter of roof

1.6. General view of roof areas

1.7. View of cap flashing

1.8. General view of plant areas

1.9. View of harness anchor points

1.10. Harness anchor point information plate

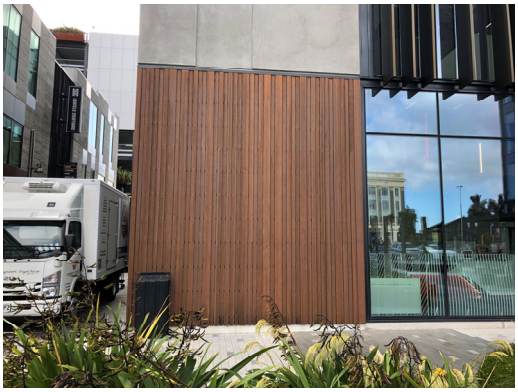
1.11. View of external elevations

1.12. View of external elevations

1.13. View toward main staff entrance

1.14. View of courtyard and external elevations

1.15. Wall mounted Tenant signage



1.16. Vertical stained timber cladding

1.17. Wall mounted aluminium louvres

1.18. Main entrance under repair

1.19. View of canopy

1.20. View of canopy

1.21. View of sliding door track and Aco Drain

1.22. View of sliding door track and Aco Drain

1.23. View of office frontage

1.24. Concrete panels to external elevation

1.25. View of west facing elevation

1.26. View of gas supply point

1.27. General view of tram lines and side road

1.28. General view of south facing elevation

1.29. Wall mounted LED screen

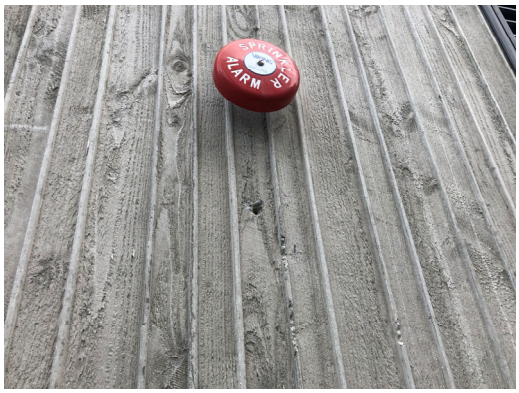
1.30. View of large video game joystick

1.31. View of timber cladding to south elevation

1.32. South east corner of building

1.33. View of east elevation

1.34. View of east elevation



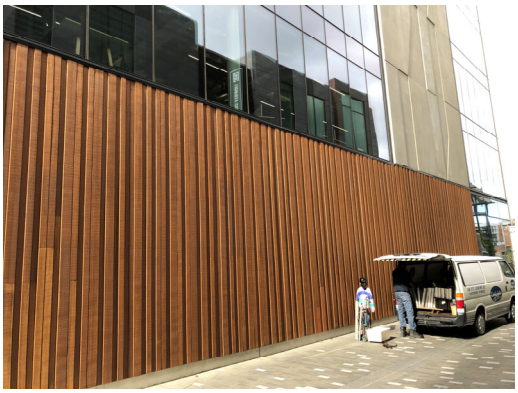
1.35. Textured Concrete Walls

1.36. General view of east access road

1.37. Aluminium office frontage

1.38. Precast concrete elevations

1.39. General view of glazed curtain walling



1.40. Vertical timber cladding boards

1.41. General view of north elevation

1.42. View of courtyard