



Australia's National
Science Agency

Perth Precinct Project (P3),

Statement of Evidence and Supporting Drawings to the Parliamentary Standing Committee on Public Works

Submission 1 – 16 October 2020

CSIRO Perth Precinct Project

Western Australia

Date:	16 October 2020
Version:	1.0
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Introduction

1. The Commonwealth Scientific and Industrial Research Organisation (CSIRO) is Australia's leading multidisciplinary research organisation, with more than 5,200 people working out of more than 50 locations in Australia and internationally.
2. Since its inception in 1926, CSIRO has played a vital role in shaping Australia and generating wealth for the nation. The organisation and its scientists have established an international reputation for excellence and achievement in basic and applied research. Its work contributes to the ongoing prosperity of Australia's primary and secondary industries and to the creation of new technologies, products, and techniques for the continuing development of Australia's manufacturing and service-based industries.
3. To support these activities, CSIRO requires property to undertake its specialised science capabilities. The organisation needs to ensure that its facilities are fit-for-purpose, support science and of a standard that will attract leading researchers and scientists.
4. CSIRO's Perth Property Portfolio comprises four sites located at Floreat, Kensington, Waterford, and Crawley. These sites accommodate approximately 480 staff and are a mix of laboratories, science process bays, storage, desk-based work area and amenities. These sites also accommodate tenanted space, typically leased to research organisations and Universities.
5. In August 2019, CSIRO's Board endorsed CSIRO's *2019-29 Property Strategy* that set out five strategic property priorities as follows:
 - a. Align Infrastructure with Science - Align CSIRO's infrastructure and facilities with the current and future needs of the Business Units.
 - b. Leverage strategic infrastructure opportunities - Capitalise on planned strategic infrastructure investment by other parties, including within the Commonwealth, state/territory and higher education sectors.
 - c. Consolidate our property footprint - Consolidate to sites and locations that align to CSIRO's future needs, improve the utilisation of properties, and optimise investment of limited funds in key sites.
 - d. Invest in maintaining key infrastructure - Identify key infrastructure and maintain/upgrade these existing facilities to be fit-for-purpose.

- e. Environmental Sustainability - Invest where appropriate in minimising the environmental footprint of facilities and operations while supporting CSIRO's own agenda to support leading environmental practice.

6. This project seeks to support the delivery of the *Property Strategy*.

Purpose of the Works

Overview

7. The rationalisation and consolidation of sites across the country is an ongoing vision for CSIRO Business and Infrastructure Services (CBIS) as outlined in the CSIRO *2019-29 Property Strategy*. The *Property Strategy* seeks to consolidate CSIRO's property footprint to sites and locations that align to the future needs of the organisation, improve utilisation of properties, and maximise investment of limited funds in key sites.

8. The utilisation of the Perth Floreat, Kensington and Waterford sites is low and inefficient. The buildings located on the Floreat site are reaching end of life, resulting in high operating and maintenance costs. Buildings at Kensington and Waterford are more modern and present opportunities for collaboration with neighbouring organisations. For these reasons, Kensington and Waterford have been identified as the sites for future CSIRO investment. The Crawley site is owned and operated by the University of Western Australia and used for University specific science collaborations so there are no P3 activities occurring at that site.

9. The goal of the Perth Precinct Project (P3) is to provide efficient, fit-for-purpose and consolidated accommodation for CSIRO's Perth staff. The project will achieve this by moving staff from CSIRO's underutilised and aging Floreat site to Kensington and Waterford sites. This project is the first step towards consolidation, with further efficiencies to be delivered by future projects, ultimately guided by the CSIRO Perth Master Plan.

Project Requirements

10. The proposed project will:
- a. Reduce operating and maintenance costs through reducing CSIRO's reliance on aging buildings and infrastructure and improving space utilisation.

- b. Deliver a cost effective, value for money property solution, consistent with Commonwealth and CSIRO property, accommodation, Health Safety and Environment (HSE) and Human Resources (HR) policies.
- c. Support staff health, safety, and wellbeing by providing modern, safe, and fit-for purpose world-class facilities.
- d. Increase CSIRO collaboration through co-location.
- e. Better utilise existing infrastructure for compatible uses and deliver improvements in infrastructure.
- f. Deliver improvements in information and communication technology to meet the needs of the next ten to twenty years.
- g. Deliver efficient allocation of workspaces, resources, with the ability to modify and adapt these spaces as CSIRO needs change in the future.

CSIRO Business Units

11. Business units being relocated or consolidated by this project include:

- a. Land and Water (L&W) – Provides the science to underpin Australia’s economic, social, and environmental prosperity through stewardship of land and water resources, ecosystems, and urban areas.
- b. Health and Biosecurity (H&B) – This Business Unit has two teams – eHealth team and the Ecosystem Change Ecology (ECE) team and are dedicated to conducting scientific research that develops products and services to address the complexity and interdependencies of human, animal and environmental health and biosecurity challenges to provide benefits to Australia and the world.
- c. CSIRO Business Infrastructure Services (CBIS) - The CBIS team are the business and infrastructure services arm of the CSIRO structure and are located across all three sites.
- d. Information Management and Technology (IMT) – This group provide a range of information management and technology services, from hardware needs to software tools, records management, and library services. They also support scientific computing and storage, and related research needs.

- e. Health Safety and Environment (HSE) – This group confirms that CSIRO’s Health Safety and Environment policies and procedures are being implemented and are located across all three sites.
- f. Mineral Resources (MR) – Currently located at CSIRO Waterford and Kensington sites, this Business Unit provides the science delivering breakthrough innovation to create a more productive, sustainable, and globally competitive mineral resources industry for the benefit of Australia and the world.
- g. Human Resources (HR) – HR representatives are located across all three sites.

Options Considered

12. A considerable amount of work was completed to identify and assess a range of possible alternative solutions to meet the project outcomes. This included financial analysis with consideration of options including the full refurbishment of the Floreat site to support the needs of the L&W Business Unit. This was quickly discounted as the cost was excessive and did not support the requirements of the *Property Strategy*.

13. Risk and value management workshops examined the benefits and disbenefits of each option and ultimately lead to the development of the following three costed options presented in the Detailed Business Case.

Summary of Options

14. Ultimately, the detailed business case developed by CSIRO for the works outlined in this submission examined three options. These were:

- a. Option 1: Do nothing.
- b. Option 2: Preferred:
 - i. relocate all of the L&W Business Unit to Waterford
 - ii. move the H&B eHealth Team from Floreat to Kensington
 - iii. move corporate services’ (HR, IMT, HSE) permanent location from Floreat to Waterford
 - iv. consolidate those MR team members located at Waterford
 - v. consolidate H&B ECE, IMT, CBIS and other support staff remaining at Floreat

- vi. mothball vacated areas in building 1, 1A, 1B and 1C and all of buildings 34 and 46 at Floreat.

c. Option 3: Full scope:

- i. relocate all of the L&W Business Unit to Waterford
- ii. move the H&B eHealth Team from Floreat to Kensington
- iii. move corporate services' (HR, IMT, HSE) permanent location from Floreat to Waterford
- iv. consolidate those MR team members located at Waterford
- v. consolidate H&B ECE, IMT, CBIS and other support staff remaining at Floreat
- vi. demolish buildings 1A, 34 and 46 at Floreat
- vii. provide a new carpark with electric car charging stations at Waterford
- viii. provide an upgraded bike shed at Waterford
- ix. enclose north-south walkway at Building 1, Waterford
- x. provide an external canopy to building 1B at Floreat.

Comparison of Options

15. To enable the options to be evaluated and a preferred option recommended, a series of high-level non-cost related performance criteria was developed. These evaluation criteria are as per Table 1.

Table 1 Performance Criteria

No	Criteria	Description
1	Collaboration	Improve opportunities for different functional groups to collaborate utilising similar facilities.
2	Effective Workplaces	Improve working conditions for staff by providing accommodation that effectively meets users' requirements.
3	Workplace health safety and wellbeing	Improve workplace health and safety and wellbeing by providing modern and compliant refurbished spaces.
4	Infrastructure	Reduce reliance on ageing infrastructure.

5	Information and Communication Technology (ICT)	Deliver improvements to ICT to support staff for the next 10+ years.
6	Utilisation	Better utilise existing infrastructure for compatible uses. Improve space utilisation.
7	Flexibility	Provide solutions that can be modified and adapted as research needs evolve.
8	Compliance with CSIRO Accommodation Guidelines	Improve compliance with CSIRO Accommodation Guidelines.
9	Compliance with National Standards	Improve Australian Standards and National Construction Code compliance by addressing existing sub-standard conditions.
10	Ecologically Sustainable Design	Adopt eco-friendly design principles that reduce energy use, water consumption, waste generation and maintenance costs to minimise operating costs.

16. Using these criteria, detailed assessments of the options were completed to provide a basis for comparing the options. Table 2 graphically summarises the evaluation of each of the costed options against these key non-financial considerations.

Key	Fully meets key requirements	✓
	Partially meets the requirements – some significant residual risks	O
	Does not address the requirements	X

Table 2 Options Considered & Assessment of Functional Needs

Criteria	Option 1: Do nothing	Option 2: Preferred Scope	Option 3: Full Scope
Collaboration	X	✓	✓
Effective Workplaces	X	✓	✓
Workplace health safety and wellbeing	X	✓	✓
Infrastructure	X	O	✓

ICT	X	✓	✓
Utilisation	X	✓	✓
Flexibility	X	✓	✓
Compliance with CSIRO Accommodation Guidelines	X	✓	✓
Compliance with National Standards	X	✓	✓
Ecologically Sustainable Design	X	✓	✓

Option One - Do nothing

17. CSIRO considered the feasibility of avoiding any relocation of Business Units to other sites and continuing to operate each site as it is currently being operated. The 'do nothing' option fails to address any of the project requirements identified by CSIRO. This option effectively defers, but does not avoid, the need for either a major investment in the accommodation for these Business Units or the identification of alternate suitable accommodation elsewhere.

Option Two - Preferred

18. The scope captured in option two addresses fully all but one of the project requirements. This option does not fully meet the 'Infrastructure' criterion as this option retains and mothballs rather than demolishes unused buildings at Floreat.

Option Three – Full Scope

19. The scope proposed addresses all project requirements. However, given that Option 3 has been costed at \$19,715,880 (ex GST) it is significantly higher than the Option 2 estimate at \$18.723m, so is not recommended.

Preferred Option

20. On consideration of both non-financial and financial aspects, option two is the preferred option. This option was endorsed by both the CSIRO Project Control Group (PCG) and the CSIRO Executive Team (ET). in the Detailed Business Case (DBC). At their meeting on 8 October 2020 the CSIRO ET approved the DBC for submission to PWC.

Current Site Constraints and Opportunities

21. The four sites occupied by CSIRO in Perth are as follows:

- a. Floreat
- b. Kensington
- c. Waterford
- d. Crawley.

Floreat

22. The Centre for Environment and Life Sciences is located at Underwood Avenue, Floreat, approximately 7km north west of Perth. Established in 1968, the site is the oldest CSIRO site in Perth and has a significant amount of aging building stock that is no longer suitable for occupation without significant investment.

23. External tenants include The University of Western Australia (UWA) and the Western Australian No-Tillage Farmers Association.

24. The site is recorded as a CSIRO title and more than 130 CSIRO staff from Agriculture and Food, L&W and H&B Business Units plus affiliates are based there. The title documents describe if CSIRO is to cease operations at Floreat, the land ownership cedes to the UWA.

25. The site is impacted by the Subiaco Wastewater Treatment Plant Odour Buffer, which restricts development of the Floreat site. The Water Corporation has defined the entire site as contained within the Water Corporation Odour Buffer Zone. This buffer zone is to ensure that residential land use is not located close to the wastewater treatment plants or wastewater pump stations.

26. There is some opportunity to consolidate existing staff in the space currently occupied. There is also a requirement to retain existing IMT infrastructure including the Communications,

Server and Tape Rooms located in Building 1, Level 2 on site along with retaining existing front of house amenities.

Kensington

27. The CSIRO Kensington site is located at 26 Dick Perry Avenue in Kensington, approximately 7km south east of Perth. It was established in 2001 with a principal focus on resource sciences.

28. The site is partially owned by the WA Government and partially owned by CSIRO. CSIRO has a 99-year peppercorn lease of the Australian Resources Research Centre (ARRC) and owns the Bush Fires Board Building and the Pawsey Supercomputing Centre on two separate titles.

29. More than 175 CSIRO staff plus affiliates are based at the Kensington site.

30. There is some unallocated space available at Kensington suitable for use by other CSIRO Business Units.

Waterford

31. The Australian Minerals Resource Centre is located in Waterford, approximately 10km south east of Perth and was established in 1994 with a focus on mineral processing.

32. The site is a CSIRO leasehold, however ownership of the land will transfer fully to CSIRO on 30 June 2024. The land usage at the Waterford site is restricted to industrial and research functions.

33. Approximately 50 staff from the MR Business Unit are based at the site.

34. External tenants include Altilium Group, Ecolab, Curtin University of Technology, Curtin WA School of Mines and ChemCentre. The lease for ChemCentre is expiring on 01 December 2020 and the lease for Ecolab will be expiring in mid-January 2021.

35. There is a significant amount of underutilised space available at Waterford and further opportunity to consolidate existing staff currently occupying the space.

Crawley

36. The CSIRO Crawley site houses the Oceans and Atmosphere team and is located on the University of Western Australia Crawley Campus. This building is owned and operated by the

University of Western Australia and used for University specific science collaborations. There are no P3 activities occurring at the Crawley site and it is excluded from the project.

Scope of Works

37. The scope of the project under the preferred option is described as follows:

- a. Move the L&W Business Unit from Floreat and providing desk-based work areas and associated support spaces, laboratory, and storage facilities at Waterford.
- b. Move the H&B eHealth Team from Floreat and providing desk-based work areas and associated support spaces at Kensington.
- c. Move corporate services' (HR, IMT, HSE) permanent location from Floreat and providing desk-based work areas and associated support spaces at Waterford.
- d. Consolidate those MR team members located at Waterford.
- e. Consolidate H&B ECE, IMT, CBIS and other support staff remaining at Floreat
- f. Mothball vacated areas in building 1, 1A, 1B and 1C and all of buildings 34 and 46 at Floreat.

38. The relocation works will encompass:

- a. refurbishment (see below) of empty spaces to accommodate relocated groups
- b. pack up of all furniture, fittings, and equipment
- c. relocation of items to be retained and removal of those items to be disposed of
- d. refurbishment of those vacated spaces to be reused (see below) or decommissioning of those areas to be mothballed
- e. decommissioning including the removal of remaining equipment, furniture, and fixtures, capping, and sealing of sewer pipework, isolation of hot and cold-water services and water drained from the system.

39. The refurbishment works will encompass:

- a. demolition of internal fit-out to allow for adaptive re-use
- b. modification and reconfiguration of existing services
- c. provision of new services where existing services are not present or modification of existing services to accommodate the new layout

- d. office accommodation including partitioning, provision of workstations, storage units and loose furniture
- e. laboratory accommodation including provision of benches with specialised services and equipment
- f. science process bay accommodation including provision of benches with specialised services and equipment
- g. fit out of storage spaces including appropriate racking, benches, secure areas and specimen storage.

Zoning and Approvals

40. All design documentation is to comply with the applicable occupational health and safety and environmental legislation and the requirements of local, State and federal authorities, as well as specific CSIRO requirements. A Building Certifier has been appointed for the project and will provide a certificate confirming the design documents meet all relevant standards and requirements before construction commences.

41. Where required, planning approval, building and occupancy permits will be obtained from the relevant local government authorities.

42. A Building Surveyor will carry out inspections during the construction phase to confirm the building work is being undertaken correctly and will issue a certificate of final inspection when the work is completed.

43. There may be a requirement for Business Units to obtain specific licences in relation to their research activities. These will be sought by the Business Units involved, however, may also require design input (to be determined during the design phases) from the project design team. Specialist resources will be project funded.

44. Laboratories being refurbished for the L&W Resource Sector Biotechnology (RSB) teams require designs and certification achieving Biosecurity Containment Level 1 (BC1) and Biosafety Containment Level 2 (BC2). The Australian Government Department of Agriculture, Water and the Environment (DAWE) has set requirements for how activities can be performed under an Approved Arrangement (AA) for BC1 to BC4 facilities. The class of AA is based on the type of activities taking place in the arrangement, and associated biosecurity risks. The extents of BC1 and BC2 laboratories proposed for Level 2 of Waterford's Building 1 require assessment by a third

party assessor as part of the commissioning process prior to the team taking occupation of the defined spaces.

Details of land acquisition

45. This project does not involve the acquisition or sale of land by the Commonwealth.

Details of applicable codes and standards

46. The project will comply with all relevant statutory requirements including the National Construction Code (NCC) and Australian Standards. In addition, CSIRO has several standards and guidelines that must be met in the proposed new consolidation plans. These include:

- a. CSIRO Accommodation Guidelines
- b. CSIRO Structured Cabling Specification
- c. CSIRO Basic Video Conference Room
- d. CSIRO Submetering Strategy 2020.

47. CSIRO will ensure that all relevant codes and standards are included in the design and building briefs.

Planning and Design Concepts

48. The general design philosophy for the proposed facilities incorporates the following considerations. It will:

- a. be in accordance with CSIRO accommodation guidelines
- b. provide a contemporary, versatile and flexible laboratory environment
- c. provide a safe and secure environment for staff and operational requirements
- d. provide a staff centred work environment in terms of space standards, access to natural light, amenities and ventilation
- e. provide an environment conducive to staff collaboration, interaction and collegiality.

Functional Spaces

Work Spaces

49. Accommodation will be provided in accordance with the CSIRO Accommodation Guidelines and include:

- a. collaborative desk-based work areas
- b. confidential work areas and zones
- c. activity based workspaces
- d. photocopy, printing, and utility spaces
- e. small administration stores
- f. an open plan arrangement
- g. support spaces such as meeting rooms, training rooms, collaborative spaces, quiet rooms, and resources areas to support the collaborative desk-based work areas.

50. The project seeks to open-up banks of offices around the perimeter of buildings at Waterford to provide desk-based activity space with a variety of quiet spaces, and meeting rooms. Desk-based work areas will utilise the furniture, fittings, and equipment accessible to the CSIRO via existing Panel purchasing agreements.

51. The Australian Government Property Data Collection (PRODAC) Guideline was established to assist agencies in identifying better property management practice and to inform whole of government property policy. The density target associated with desk-based work areas and associated support spaces in the CSIRO Accommodation Guidelines is consistent with the Government's target of 14m² of useable office space per occupied work point.

52. For this project, many of the research staff being relocated to Waterford access dry and wet laboratories as well as science process bays. For these staff, the PRODAC guideline cannot apply. The space allocation for laboratories is based on laboratory benchmarking rather than PRODAC calculations.

53. Planning for social distancing required in response to the COVID-19 epidemic provides flexibility in layouts for desk-based work areas so staff density can flex up and down as required. Laboratory sizes are largely maintained per the existing layouts of 38sqm and 58sqm modules and occupation density limits can be set to enable enforcement of appropriate occupation limits.

Typically, laboratory modules are occupied by between one and four people, which enables maintenance of appropriate distancing.

Laboratories

54. Most of the laboratory requirements for the L&W user groups can be accommodated in general PC2 laboratory environments. The requirements for strictly controlled or contained environments is limited to the L&W RSB user group as noted above, who utilise BC1 and BC2 laboratories. These facilities currently located in Building 1, 1C and 34 at Floreat.

55. Flexibility is a key requirement in all CSIRO labs. Larger, consolidated labs that can be notionally subdivided into different work areas for various groups or experiments are preferred to smaller cellular project specific labs. Spaces used by groups need to be able to flex up or down freely without requiring structural changes or benching reconfiguration.

56. The opportunity for business units to share laboratory facilities is limited. Work undertaken by each of the groups tends to be incompatible and cannot occur within the same spaces without cross-contamination. The design allows for the quarantine and radiation laboratories to be shared.

Science Process Bays

57. Science process bays are used for a wide range of activities ranging from sorting, drying and grinding samples, to building field monitoring devices and equipment repair. They are also used for experiments which cannot be accommodated in standard laboratories. Science process bays are multi-purpose spaces with hardwearing benchtops and durable finishes.

58. The science process bays at Waterford will be shared by many of the L&W and MR user groups.

59. Benches can be reconfigured to accommodate changing requirements. Benching is not fixed and restricted by services. Free floor space is a critical requirement for flexibility.

Storage Spaces

60. Storage areas include the following categories:

- a. long term specimen storage: generally, specimens stored for extended periods will be accommodated either in laboratories or in the pallet storage shed on the Waterford site

- b. general field equipment storage: general field equipment will be accommodated in the pallet storage shed on the Waterford site
- c. laboratory storage for consumables and laboratory equipment is generally provided within the laboratory areas or in dedicated areas adjacent to the laboratories
- d. continuing storage for H&B ECE Team field equipment is required and will be provided at Floreat.

Materials and Finishes

General

61. Materials and finishes used will be selected for appearance, durability, functionality, ease of maintenance and cleaning, availability of local support, supply and replacement.
62. Typical materials and finishes will include glass for meeting room partitions, plasterboard painted with washable acrylic paint, fabric panels on workstation screens, timber veneer or laminate finishes to workstations and meeting tables, feature colours on selected painted walls and plasterboard and feature ceilings in key areas. Where possible, the design team will implement the use of recycled materials.

Laboratories

63. Materials and finishes for laboratories will be compliant with Australian Standard 2982:
- a. Construction Materials and Finishes – Construction materials and finishes shall be chosen to address the risks of contaminant exposure applicable to laboratory areas.
 - b. Floors – Floors in laboratories shall be finished with materials that are easy to clean, smooth, impervious, resistant to chemicals used in the laboratory, compatible with the nature of the laboratory operations and operator comfort and slip resistant. Where there is a risk of spillage of hazardous, potentially infectious or unsealed radioactive material, the intersection of floors with walls and exposed plinths shall be coved to facilitate cleaning.
 - c. Walls – All walls in laboratory work areas shall be finished with materials that are easy to clean, smooth, impervious, and resistant to chemicals used in the laboratory.
 - d. Ceilings – Ceilings in laboratory areas shall be constructed of a rigid material in continuous or tiled systems and may include fibrous plaster, plasterboard, fibrous

cement, cement render or other suitable material. Smooth faced, non-friable, impervious, washable ceilings shall be provided where contamination of the ceiling can occur, decontamination is required, very clean conditions are required or fumes, dust or vapours are generated.

Science Process Bays

64. For classified science process bays the fit-out will be closely aligned with the description provided to laboratories under reference 6.2.2. For light and heavy industrial science process bays without specific classification requirements the finishes will be robust and will enable flexibility in the room configuration and use. Typical finishes will include sealed concrete, sheet vinyl or epoxy flooring and for walls; plasterboard, fibre cement sheet, concrete, or sheet metal. Ceilings may be acoustic plasterboard, fibre cement sheeting or non-lined to underside of insulated sheet metal linings.

Electrical and Communications Services

Floreat

65. The existing main switchboard feeding Building 1 at Floreat will be partially upgraded to appropriately accommodate the H&B ECE team. The existing main fused disconnect and sub-main fused disconnect feeding Levels 1 and 2 distribution board will be removed and replaced with new automatic circuit breakers.

66. New general power outlets (GPO) will be installed for the new seed storage dehumidifier.

Kensington

67. The existing switchboard within the proposed store will be relocated to accommodate the proposed layout. Existing luminaires will be removed and replaced with new energy efficient recessed light-emitting diode (LED) luminaires and new LED luminaires will be added to suit the new layout in accordance with AS1680. The quantity of new LED luminaires shall be provided as required to achieve the minimum 320 lux average lighting level.

68. New self-contained, recessed LED emergency lighting and exit signage will be provided to suit the new layout to comply with AS2293.

69. New GPO will be added for new desks and workstations. Wall-mounted GPO and data outlets will be provided in meeting rooms for audio and video system requirements. New GPO will be provided for tea point appliances.

Waterford

70. The existing main switchboard feeding Buildings 1, 2 and 10 will be retained and reused to feed existing distribution boards.

71. New sub-distribution boards will be installed in levels 1 to 3 in the north and south wings of Building 1 to feed individual laboratory distribution boards that are presently wired in a sequence. Existing rising sub-mains cables feeding each level will be re-routed and re-terminated to the new sub-mains distribution board.

72. A new distribution board will be installed in the new laboratory.

73. Existing laboratory and office distribution boards will be modified/upgraded with new combination residual current device and circuit breaker (RCBO) to feed new lighting and power sub-circuits.

74. New energy-efficient recessed LED luminaires will be installed in new rooms and areas including desk-based work areas.

75. New emergency lighting and exit signage will be provided to suit the new layout to comply with AS2293.

76. New GPOs will be added for new desks and work-stations in the desk-based work areas.

77. New data outlets and horizontal cabling will be installed to suit the new desk layout.

Mechanical Services

Floreat

78. The Building 1 Level 1 refurbishment will consolidate the relocation of the H&B ECE team with minor modifications.

79. Building 1A will be mothballed. Building 1B reception, the adjacent offices and Building 1C canteen will be retained. The computer, tape room and communications room can be maintained as operational with the remaining areas of the building being mothballed with relative ease.

Kensington

80. The existing ductwork and air distribution will be modified to suit the refurbished areas including replacement of end of life air-conditioning units. Existing mechanical switchboards will be upgraded or replaced to suit this equipment and existing controls modified.

Waterford

81. The scope of work for mechanical services at Waterford includes the replacement or upgrade to the existing dedicated mechanical services switchboards and modifications to existing controls with new controls and wiring for new equipment across all buildings. In addition, the scope includes the following elements at each building:

- a. Building 1:
 - i. replacement of the obsolete air handling equipment including air handling units, associated pipework, duct-work and fans
 - ii. new ductwork and air distribution for refurbished areas
 - iii. replacement of fume cupboard exhaust systems where existing systems are no longer compliant
 - iv. replacement of ventilation fans where required
 - v. modification of existing laboratory gases system to suit the new arrangement in refurbished areas.
- b. Building 1A:
 - i. modification to existing ductwork and air-distribution for refurbished areas
 - ii. replacement of obsolete split air-conditioning systems
 - iii. mechanical services to support the conversion of office space into laboratory space
 - iv. provision of new heating, ventilation, and air-conditioning (HVAC) services
 - v. new gases infrastructure
 - vi. new fume cupboard exhausts
 - vii. provision of a new cold-room.
- c. Building 2:

- i. modification to ventilation, air-conditioning and heating systems is required to suit the new layout
 - ii. new ductwork and air distribution systems for refurbished areas
 - iii. replacement of fume cupboard exhaust systems where existing systems are no longer compliant
 - iv. replacement of ventilation fans where required
 - v. modification of the existing laboratory gases system to suit the new arrangement in refurbished areas.
- d. Building 10:
 - i. modification to ventilation, air-conditioning and heating systems is required to suit the new layout
 - ii. new ductwork and air distribution systems are required for refurbished areas.

Fire Services

82. The existing smoke detection systems for Floreat, Waterford and Kensington will be modified to provide a compliant occupant warning system and smoke hazard management system as required by the National Construction Code.

83. The following modifications will be made to each site:

- a. Floreat – New point type smoke detectors will be installed by the project to suit revised room and floor configurations.
- b. Waterford – Existing smoke detector and occupancy warning speakers to be retained or reconfigured to suit the revised layout.
- c. Kensington – The existing fire control panel, glass alarm panel and occupancy warning system can be reused. The existing smoke detectors and occupancy warning speakers will be retained and relocated to suit new room and floor configuration. New smoke detectors and emergency warning speakers will be installed in new areas and rooms.

84. The existing fire hose reel service at the Floreat, Kensington and Waterford sites are each provided with a dedicated pipework reticulation extending from the potable cold-water supply as required. No modifications are required.

85. The existing fire hydrant services at Floreat, Kensington and Waterford will be updated and relocated where required to suit current code requirements.

86. The Fire Engineer will work with the design team, including the Certifier, to assist in determining the appropriate scope for efficiently realising building compliance.

Security Services

87. Minor changes will be made to existing security systems at each site to accommodate changes to the floor plans made by the project.

Hydraulic Services

88. Hydraulic services such as sewer, stormwater, potable water connections, non-potable laboratory water supply, laboratory trade waste connections and natural gas connections currently in place at Kensington and Waterford will be modified, extended and supplemented to allow for new fit-out works.

89. Some hydraulic site services at Floreat will need to be retained to support those groups remaining in the buildings impacted by the project. The remainder of the services will be isolated and mothballed, including the removal of fixtures, capping, and sealing of sewer pipework, isolation of hot and cold-water services. All water will need to be drained from the system to prevent the growth of bacteria and organisms.

Acoustics

90. The project incorporates measures to reduce noise in the work environment including acoustic ceiling tiles and carpeted floors in desk-based work areas. Attention will also be paid to air-conditioning to reduce noise from air movement and mechanical plant.

91. Acoustic performance criteria will be incorporated into the architectural specification to ensure adequate noise insulation between meeting rooms, conference rooms, training rooms, laboratories, science process bays and other desk-based work areas. Internal ambient noise levels and reverberation times to adhere to AS 2107:2000. Key focus areas have been identified based on existing acoustic issues encountered by users.

Parking

92. The Waterford site offers 138 formal parking bays including those spaces utilised by existing shipping containers to be removed from site. It is expected that approximately 85 existing and 100 incoming full-time equivalent staff will be on the Waterford site following the relocation of the L&W user groups. As many team members are not on site at the same time and there is informal parking space available in the grassed area east of Building 1/1A, it is understood there will be sufficient parking available for CSIRO staff once the project is complete.

93. Car parking at Waterford will be required to accommodate relocation of some fleet vehicles from Floreat, with final numbers to be confirmed. It is to be noted that some fleet vehicles will remain at Floreat for use by H&B ECE and Agriculture and Food staff.

94. A plan for contractor parking and laydown has been agreed with CSIRO for the construction period. All contractors will be required to provide a Traffic Management Plan as part of their Tender Submission where they will outline their proposal to accommodate traffic including proposed parking and laydown areas during the construction phase. On appointment, the contractor will finalise this plan with feedback from CSIRO to ensure impacts to staff parking during the construction phase are minimised.

Water and Energy conservation measures including energy targets

95. CSIRO has high sustainability aspirations, targeting reductions in carbo dioxide (CO₂) emissions and water use across its whole portfolio. Through smart and integrated design, a focus on passive design features and innovative use of responsible materials and systems, the project will aim to achieve sustainable outcomes with a focus on functionality and cost-effective fit-for-purpose solutions.

96. The Sustainable Design Checklist includes initiatives that are to be implemented into the project works to; reduce CO₂ emissions footprint of P3 sites, increase water efficiency where allowable, facilitate passive energy-efficient design, and incorporate responsible materials and construction practices

97. The following ecologically sustainable development (ESD) initiatives and themes adopted by the project are as follows:

- a. Passive design principles to be incorporated where allowable within P3 scope.

- b. Building management systems (BMS) connection to be made and metering/sub-metering networks in P3 scope to be linked into existing CSIRO sub-metering system.
- c. Basic HVAC system and component upgrades are to be made where existing services are to be replaced/upgraded, additionally some re-commissioning to occur where services are being retained.
- d. High indoor environmental quality has been accepted as a key ESD project outcome.
- e. Diversion of construction waste from landfill targets required to be met by waste management contractors.
- f. Lighting system upgrades to be incorporated excluding only those areas where existing lighting is sufficiently energy efficient (recent lighting upgrades occurred at some of the sites).

Provisions for people with disabilities

98. Buildings included in the project are required to have access provided to and within all areas normally used by the occupants. Not less than 50% of all pedestrian entrances including the principal pedestrian entrance will be accessible and every ramp and stairway will comply with AS1428.1.

99. On an accessway, where there is no chair rail, handrail, or transom, all frameless or fully glazed doors, sidelights and any glazing capable of being mistaken for a doorway or opening will be clearly marked.

Child-care provisions

100. No on-site childcare facilities are proposed. However, investigations indicate that there are numerous facilities within a three-kilometre radius of Floreat, Kensington and Waterford sites.

Work Health and Safety

101. CSIRO has an important responsibility to manage Health, Safety and Environmental (HSE) risks associated with operating its various sites in the Perth area. This project has identified and will address existing HSE risks, including the potential exposure to asbestos and other hazardous materials, enhancing code compliance, and addressing non-compliant storage and handling of dangerous goods and gasses. Safety in Design workshops have been convened with extensive stakeholder engagement to identify, mitigate, and assign HSE risk management responsibilities as

appropriate throughout the facilities design, construction, operation, and end of life demolition processes.

Environment and Heritage

102. CSIRO upholds the principles outlined in the *Environment Protection and Biodiversity Conservation Act 1999* through its operations and research activities, and this project will be required to comply. The following matters of national environmental significance protected under national environmental law include:

- a. listed threatened species and communities
- b. listed migratory species
- c. Ramsar Convention on Wetlands of International Importance
- d. Commonwealth marine environment
- e. world heritage properties
- f. national heritage places
- g. the Great Barrier Reef Marine Park
- h. nuclear actions
- i. a water resource.

103. As this project involves internal refurbishment of existing non-heritage listed buildings on sites without listing there have been no impacts identified for the project as described under the Act. There are no Aboriginal or Commonwealth heritage features identified on Floreat, Kensington or Waterford sites.¹

Impact on the local community

104. The project is expected to have a positive effect on the local economy through:
- a. Creation of jobs during construction, (consultants, construction workers, suppliers, and related services)

¹ The Waterford site is covered by the four-kilometre radius of an Aboriginal registered site, Wadjup site 24319. The Department of Planning, Lands and Heritage has confirmed that Lot 300 does not intersect with the actual boundary of the Wadjup site or other Aboriginal heritage sites or place to which the *Aboriginal Heritage Act 1972* (AHA) may apply. Therefore, no approvals under the AHA are required.

- b. use of locally sourced materials during construction
- c. increased business for local shops and cafes both during and after construction
- d. ongoing support for local trades and services through future maintenance and supply requirements.

Public Transport

105. Waterford is serviced by bus routes 30, 34, 72, 75, 100, 101, 201, 284, 960, 998 and 999 from a variety of locations within Perth. The site's proximity to Curtin University's Bentley campus ensures regular public transport accessibility.

106. Kensington is serviced by bus routes 33, 34, 101, 284 and 960 from a variety of locations within Perth. These routes service both sites.

Staging and Decanting

107. Staging and decanting will be a major consideration for the project as there is a requirement for CSIRO to maintain operations as far as possible at all sites impacted by the project. The design consultant has developed a staging and decanting plan that will be tested and modified as required during the detailed design phase and will form part of the tender documents. The relocation works will be coordinated and completed by a specialist removals consultant under a separate contract.

108. A construction contractor will review the plan and ultimately confirm the program for staging and decanting for the P3 project, for CSIRO approval. The aim of this plan will be to minimise disruption to CSIRO operations because of construction works. The contractor will be required to manage work health and safety risks around their construction site including ensuring egress paths are maintained, reducing disruption caused by excessive noise, dust and vibration and restricting access to construction areas. The contractor will also be required to provide regular forward-looking programs to allow CSIRO to plan for any disruption to operations.

Consultation with Staff and Other Stakeholders

109. During development of the proposal, consultation has been guided by the Communication and Engagement Plan established by the project at inception.

External Consultation

110. Letters have been sent through to the following identified external stakeholders:

- a. Federal Government:
 - i. Hon Steve Irons MP – member for Swan
 - ii. Ms Celia Hammond MP – member for Curtin
 - iii. Department of Treasury and Finance.
- b. State Government:
 - i. Premier Mark McGowan
 - ii. Hon William Marmion – MLA
 - iii. Mr John McGrath – MLA.
- c. Local Government Representative
 - i. Greg Milner – Mayor of City of South Perth
 - ii. Cilla de Lacy – Mayor of City of Nedlands.
- d. Office of the Federal Safety Commissioner
 - i. Mr David Denney – Branch Manager and Federal Safety Commissioner.
- e. Chamber of Commerce and Industry WA
 - i. Mr Chris Rodwell – Chief Executive Officer.
- f. CSIRO Division of Community Sector Union
- g. Other Organisations
 - i. University of Western Australia
 - ii. Curtin University.
- h. Residents local to each site.

111. The project team has provided a P3 email address and a general enquiries phone number on correspondence with external stakeholders to provide an opportunity for further information to be obtained if it is required.

Internal Consultation

112. An ongoing information and consultation process with CSIRO staff has continued from project inception. Perth staff members have been invited to the five town hall meetings held

between March 2019 and October 2020 that provided project information including program, design proposal, change updates and human resources communications.

113. There have been seven newsletters sent to Perth staff between March 2019 and October 2020 that have provided a further update on the P3 project.

114. An internal website has been established and is regularly updated that provides information about the project for impacted and interested staff. This website is supported by a dedicated P3 email address where further information can be sourced.

115. The design team have sought confirmation on user requirements and feedback on the design from nominated end user representatives through each design phase and incorporated the feedback into design documentation. A Microsoft Teams site has been established to support this interaction, which all end user representatives can access.

116. Information obtained from user representatives has informed the development of options and has ultimately led to the proposed solutions.

Change Management Strategy

117. The project is supported by a *Change Management Strategy*, that has been established by CSIRO and considers the impact of staff relocating to other sites, staff relocating within sites and staff who may be impacted by the works and changes occurring. This *Change Management Strategy* is managed by a CSIRO Change Manager, who is supported by a dedicated Change Leaders team and Change Champion team with staff members from impacted business units to promote two-way communication between staff and the project and maximise collaborative support and the adoption of change. The Change Manager reports directly to the CSIRO PCG and Project Board.

Cost Effectiveness and Public Value

Outline of Project Costs

118. The P80 cost estimate for the project is \$18.723m (excluding GST) and includes contingency, project management, design and documentation and escalation to third quarter 2021. The current cost estimate assumes that the preferred option (Option 2) is selected and has been prepared by the CSIRO's appointed quantity surveyor, based on the Schematic Design documentation.

119. The project will be funded through the CSIRO internal capital for planning and construction budget over the coming years.

Public Value

120. The public value associated with the project includes:
- a. efficiencies associated with higher density of operations
 - b. provision of safe, fit for purpose facilities to support science, and collaboration.

Value for Money

121. In assessing the options available, CSIRO undertook a whole-of-life cost assessment and determined that the proposed project provides a good value for money property solution.

Program

122. The key milestones for the project, assuming expediency is achieved, are:
- a. release to tender
 - b. tender closes
 - c. appointment of Head Contractor
 - d. Practical Completion
 - e. post-occupancy evaluation
 - f. Defects Liability Period (DLP) complete.
123. Subject to the passing of an Expediency Motion, and satisfactory pricing of the project, CSIRO will procure a Head Contractor to undertake the construction works. While the Head Contractor will ultimately confirm the construction program, the construction phase is anticipated to commence in April 2021, with Practical Completion expected to occur in February 2022. Occupancy of all areas included in the construction works is expected to be complete by February 2022. Laboratory certification for BC rated laboratories is expected to occur by August 2022. The DLP is scheduled for completion in February 2023.

Project Delivery

124. To deliver the construction works, CSIRO will procure a contractor via an open Request for Tender process advertised on the AusTender procurement website. The construction contractor will be engaged under a Head Contract for delivery of the P3 construction works.

125. CSIRO will procure a Relocations Manager to plan and manage the relocation of staff from their existing to final locations.

126. CSIRO has engaged a firm with multi-disciplinary architectural and engineering services consultants in house, to design and document the project. They have designed several similar projects with fit-out and laboratory spaces for CSIRO around Australia.

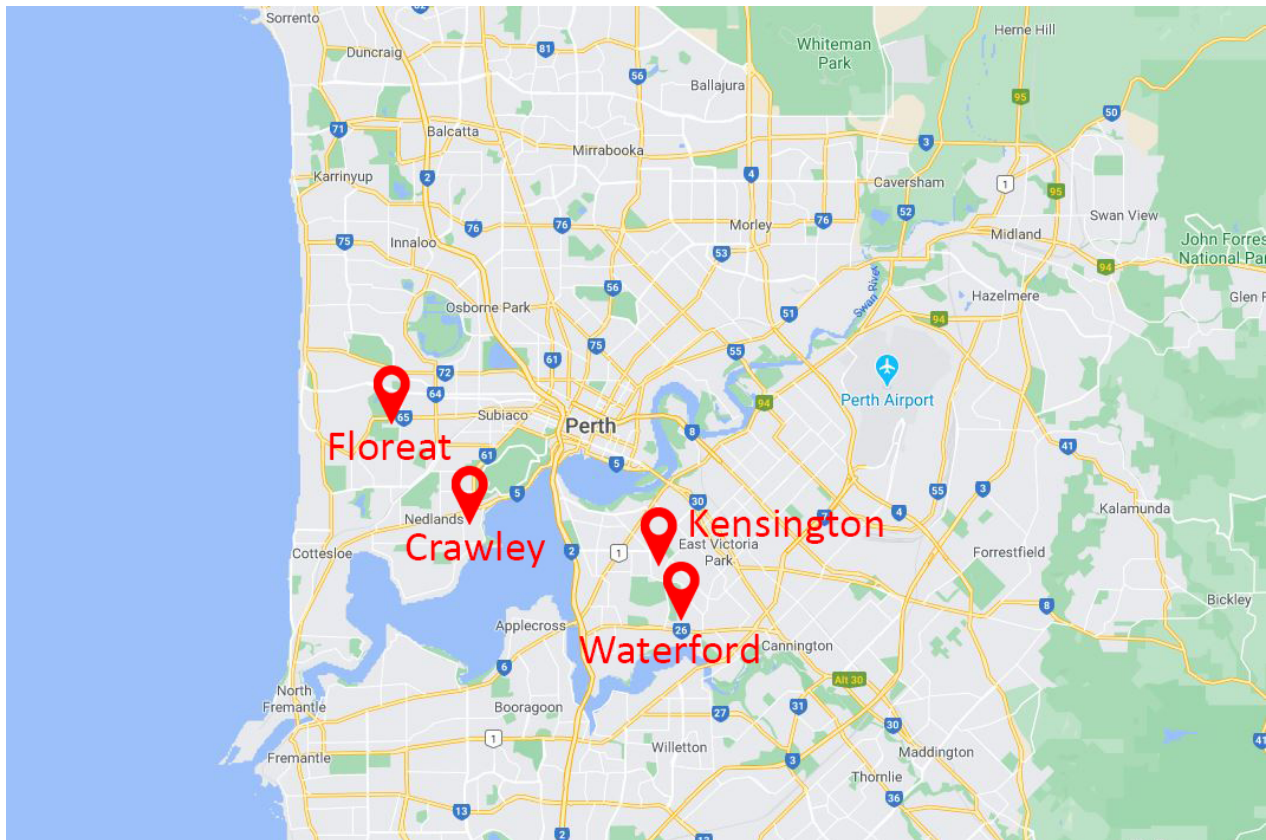
127. CSIRO has engaged a quantity surveyor, who has prepared the Project Cost Estimate based on the Schematic Design documentation.

128. CSIRO has engaged a client-side project manager, to manage the design and construction of the project.

Revenue

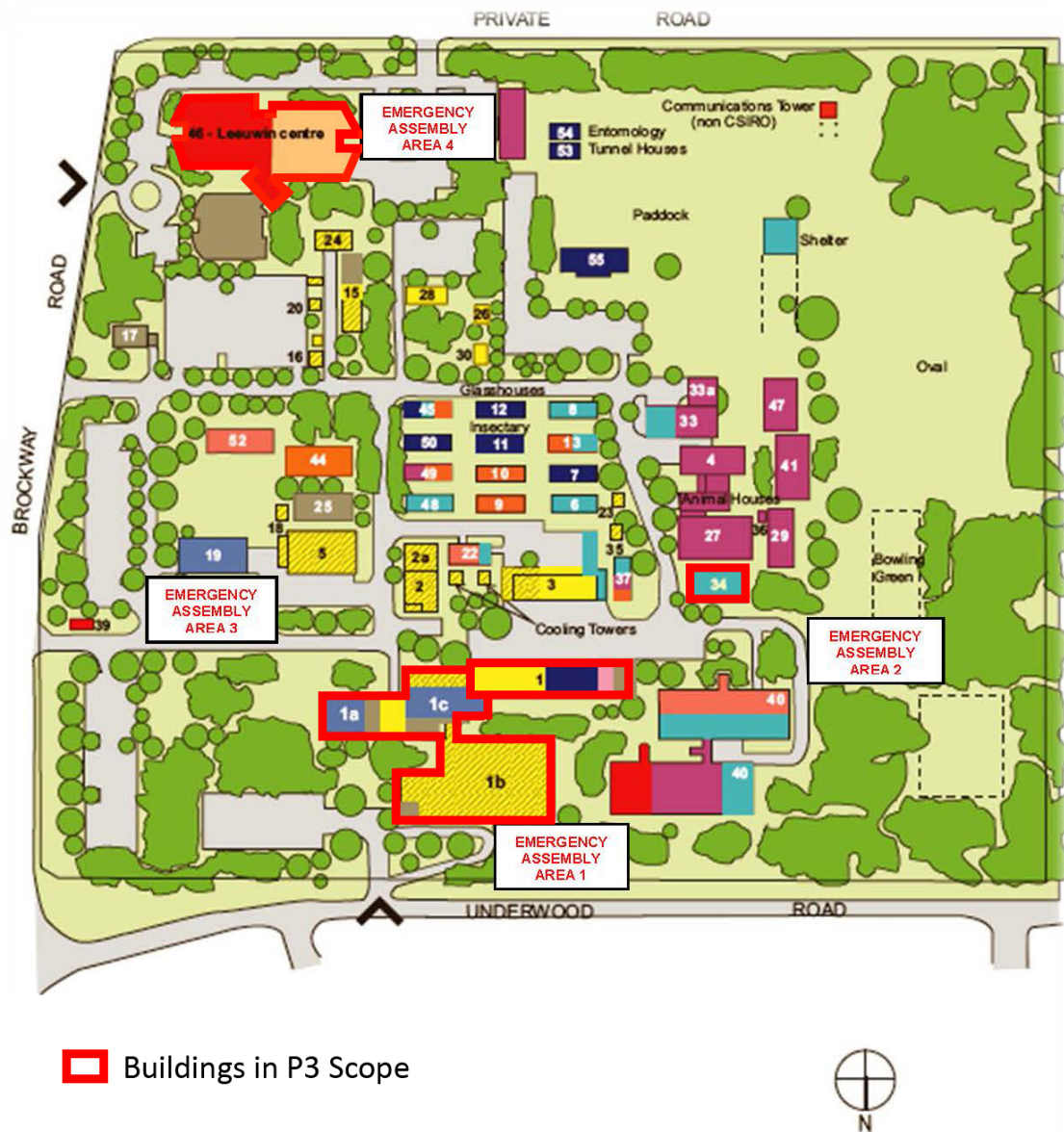
129. There is no expected revenue from the project.

Annexure A – CSIRO Perth Site Location Plan



Annexure B –Floreat Plans

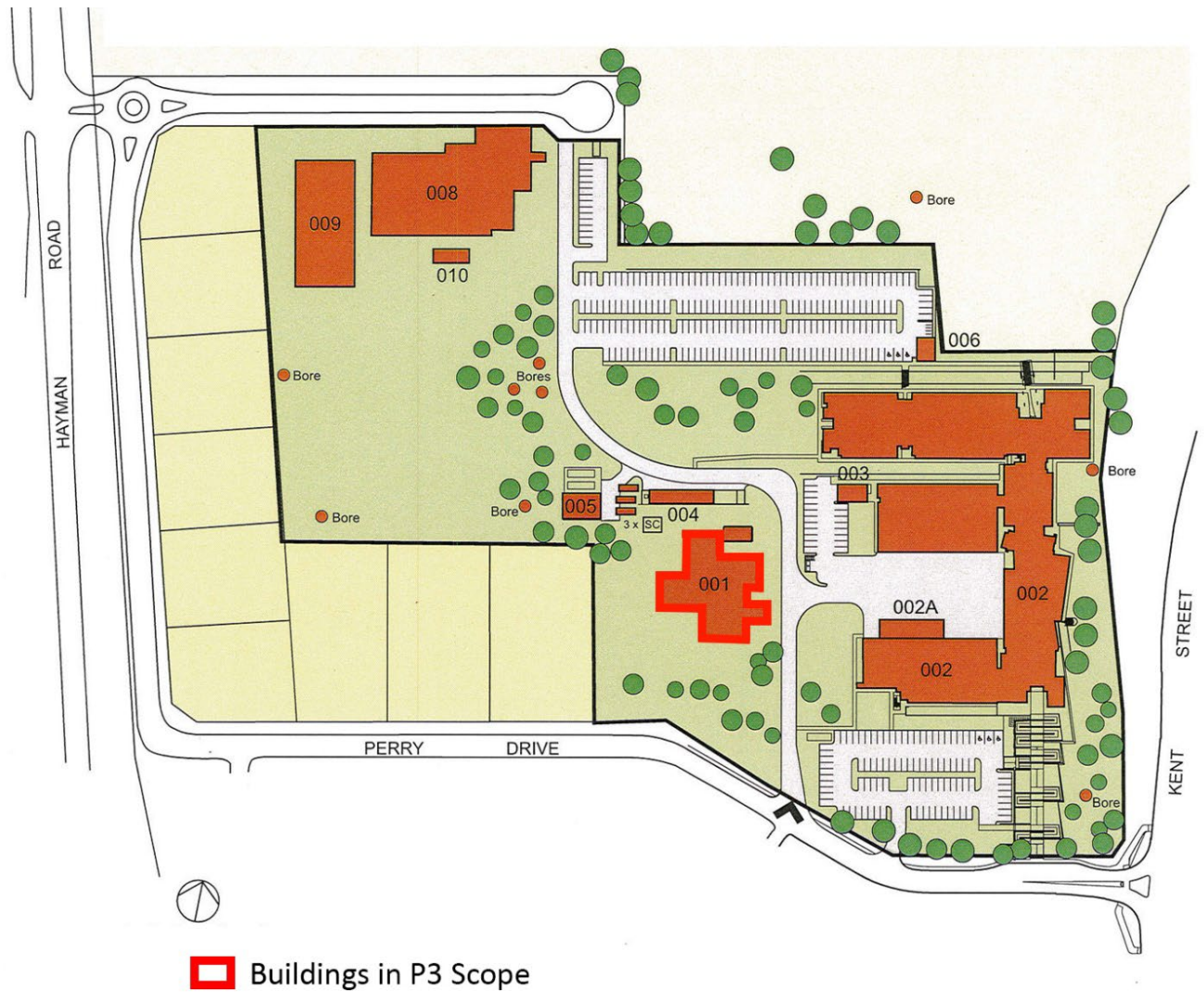
Site Plan



Works at Floreat relate to predominantly to services scope only and do not involve changes to floor plans. As a result, these works do not have an accompanying plan in this annexure.


Annexure C – Kensington Plans

Site Plan

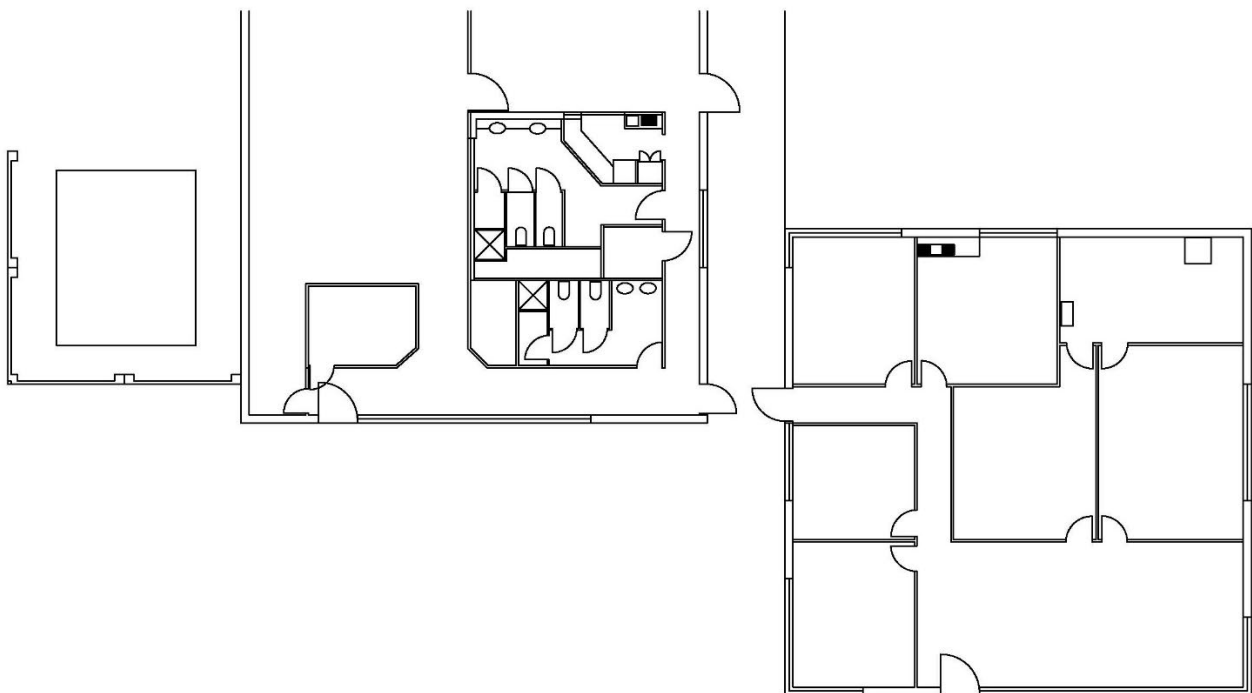


Kensington Existing Plan – Building 001

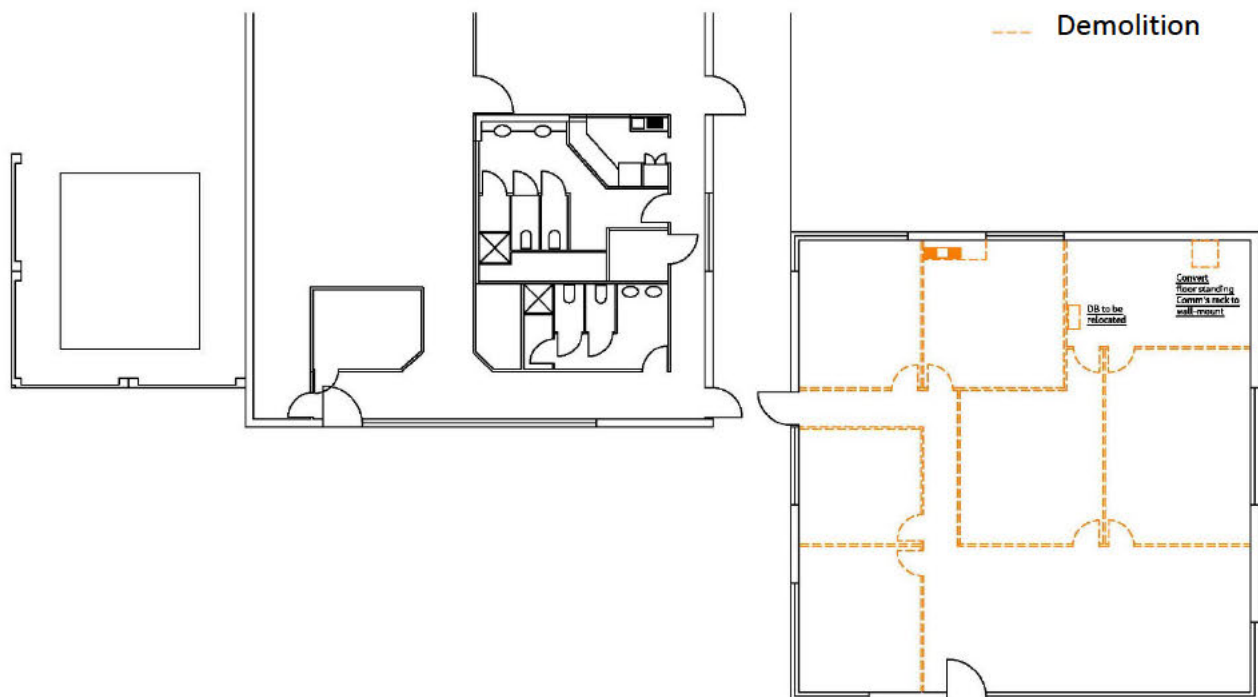


 In P3 Scope

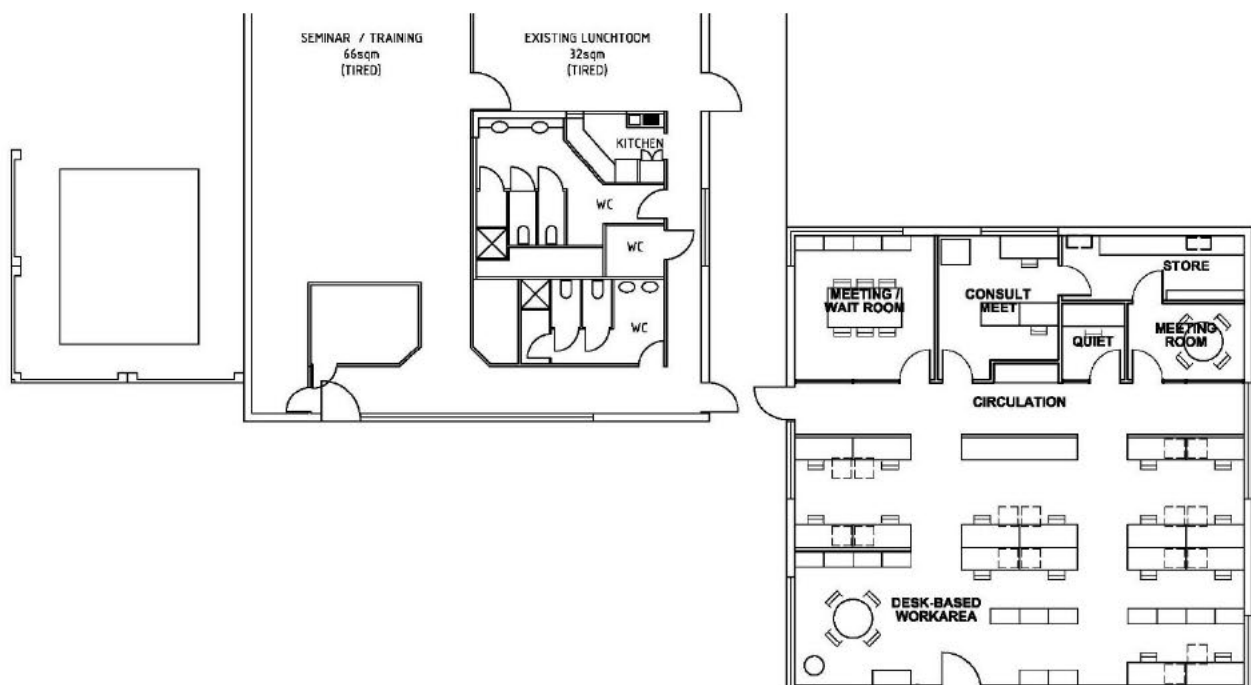
Kensington Existing Plan – Building 001



Kensington Demolition Plan

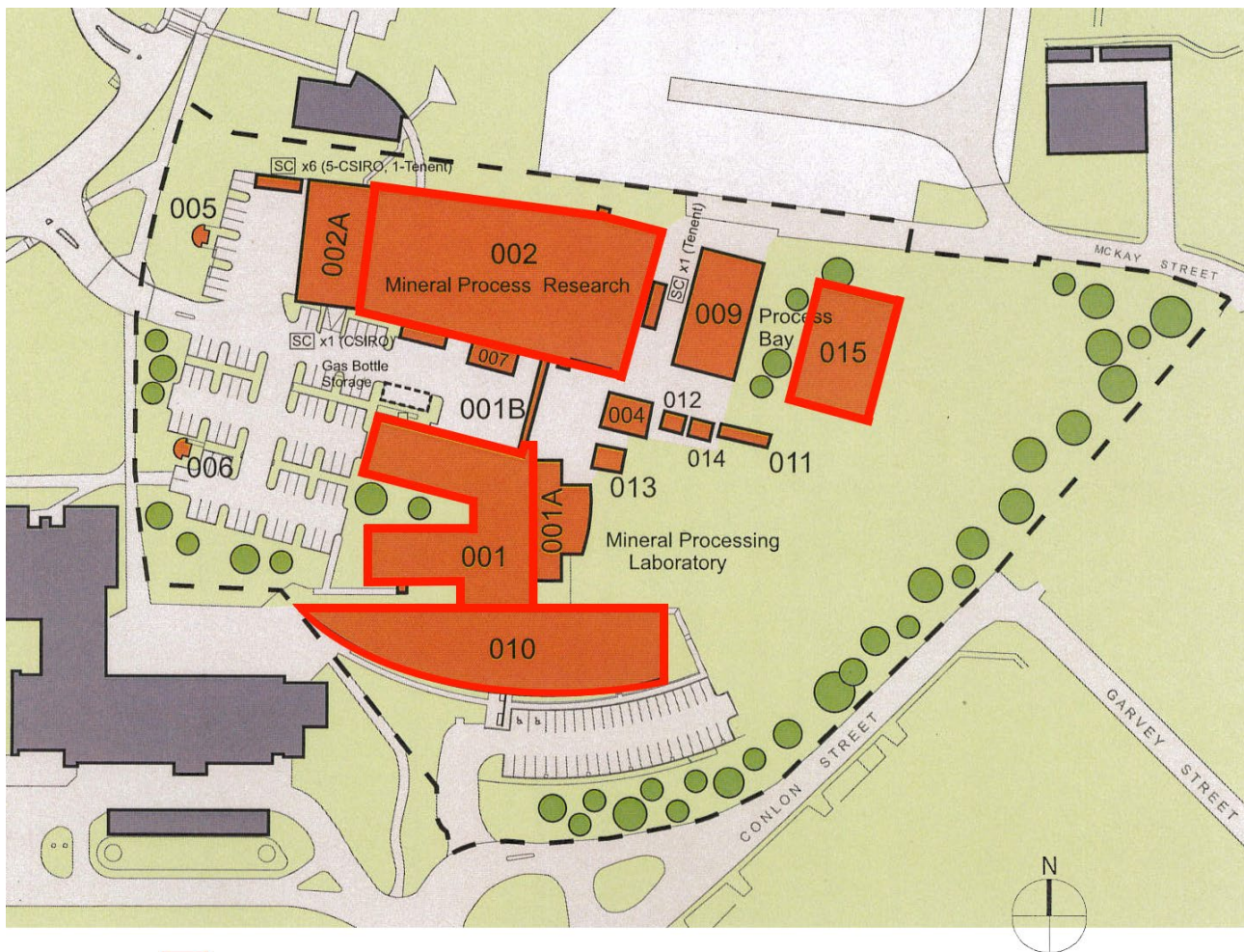


Kensington Proposed Plan



Annexure D – Waterford Plans

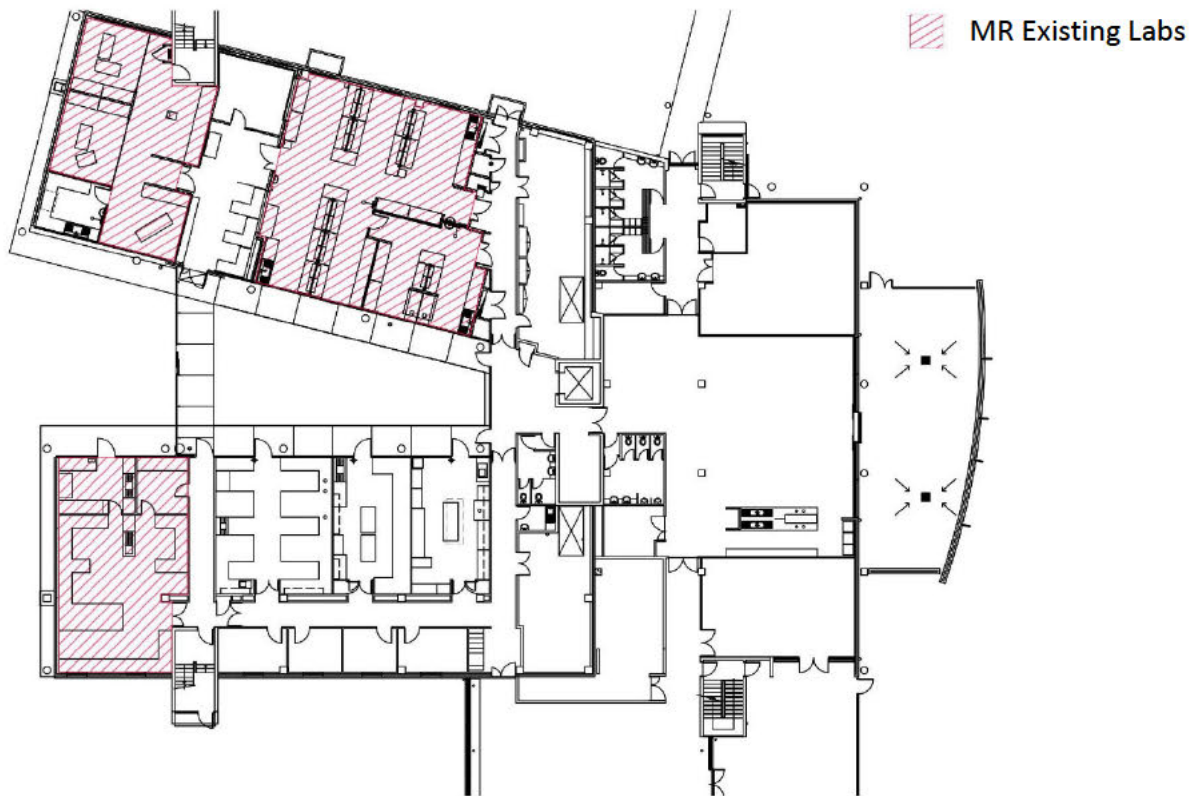
Site Plan



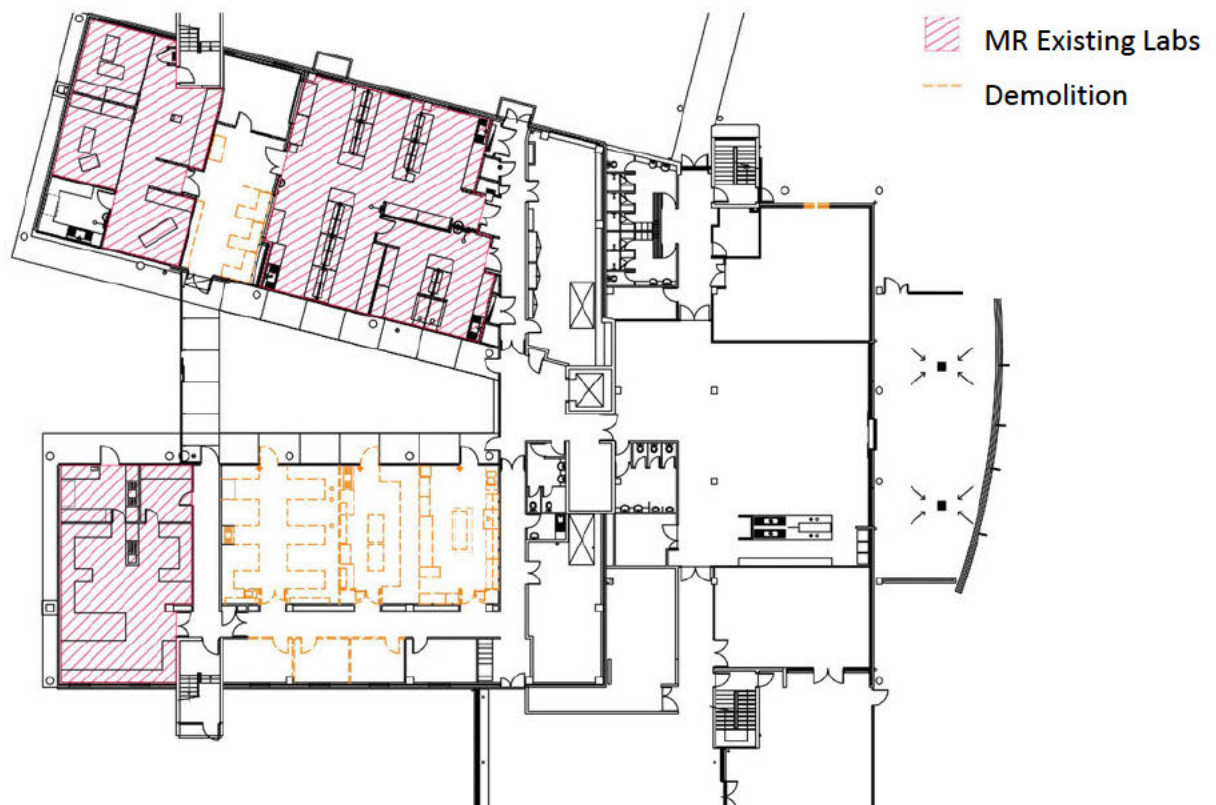
 Buildings in P3 Scope

Works in Buildings 001, 002 and 010 are conveyed below. The works in building 015 are minor in nature and do not have an accompanying plan.

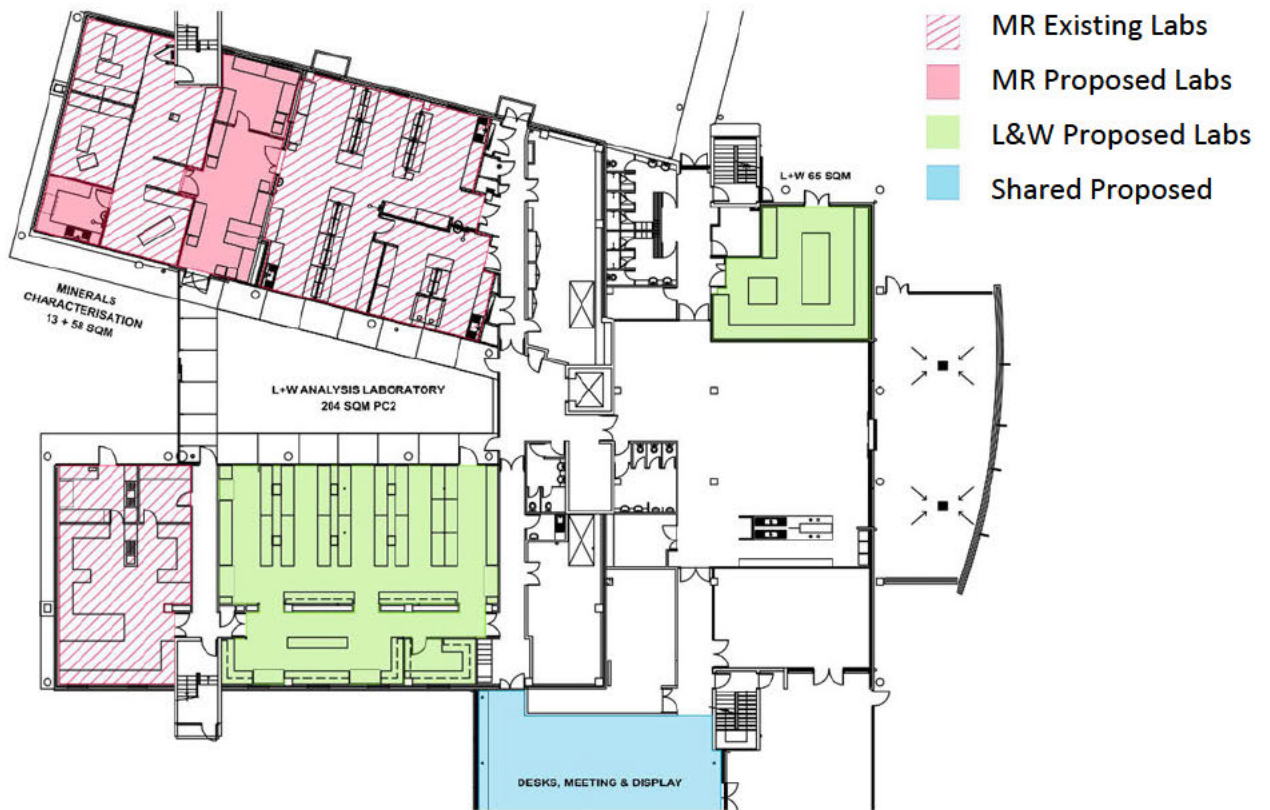
Waterford Existing Plan – Building 1, Level 1



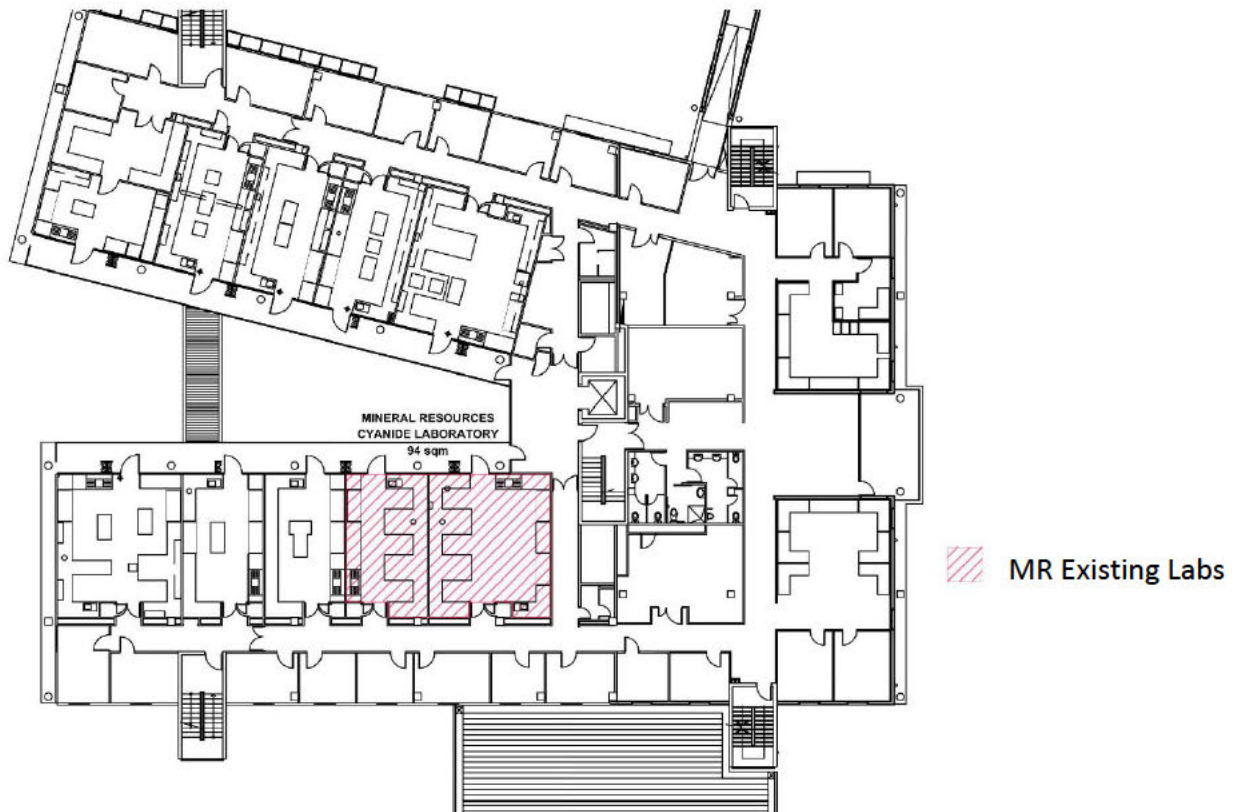
Waterford Demolition Plan – Building 1, Level 1



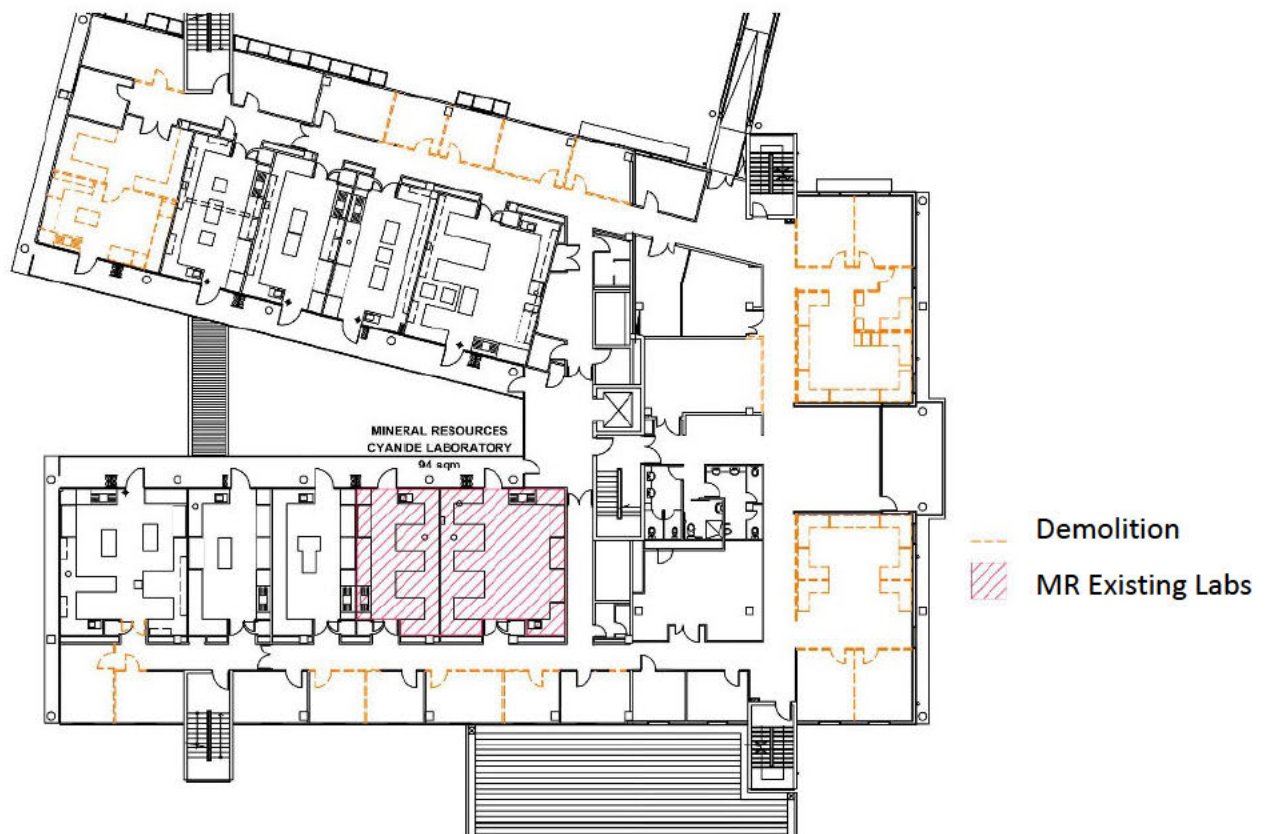
Waterford Proposed Plan – Building 1, Level 1



Waterford Existing Plan – Building 1, Level 2



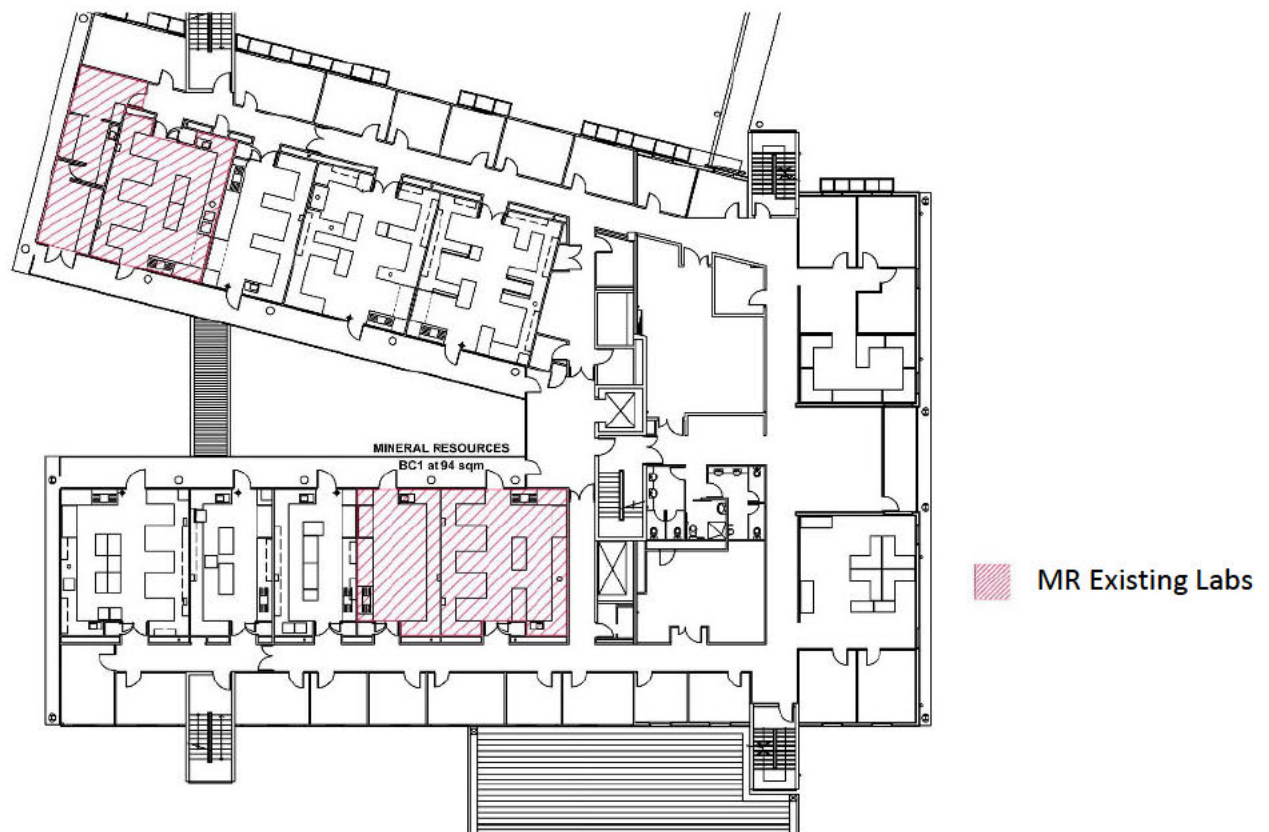
Waterford Demolition Plan – Building 1, Level 2



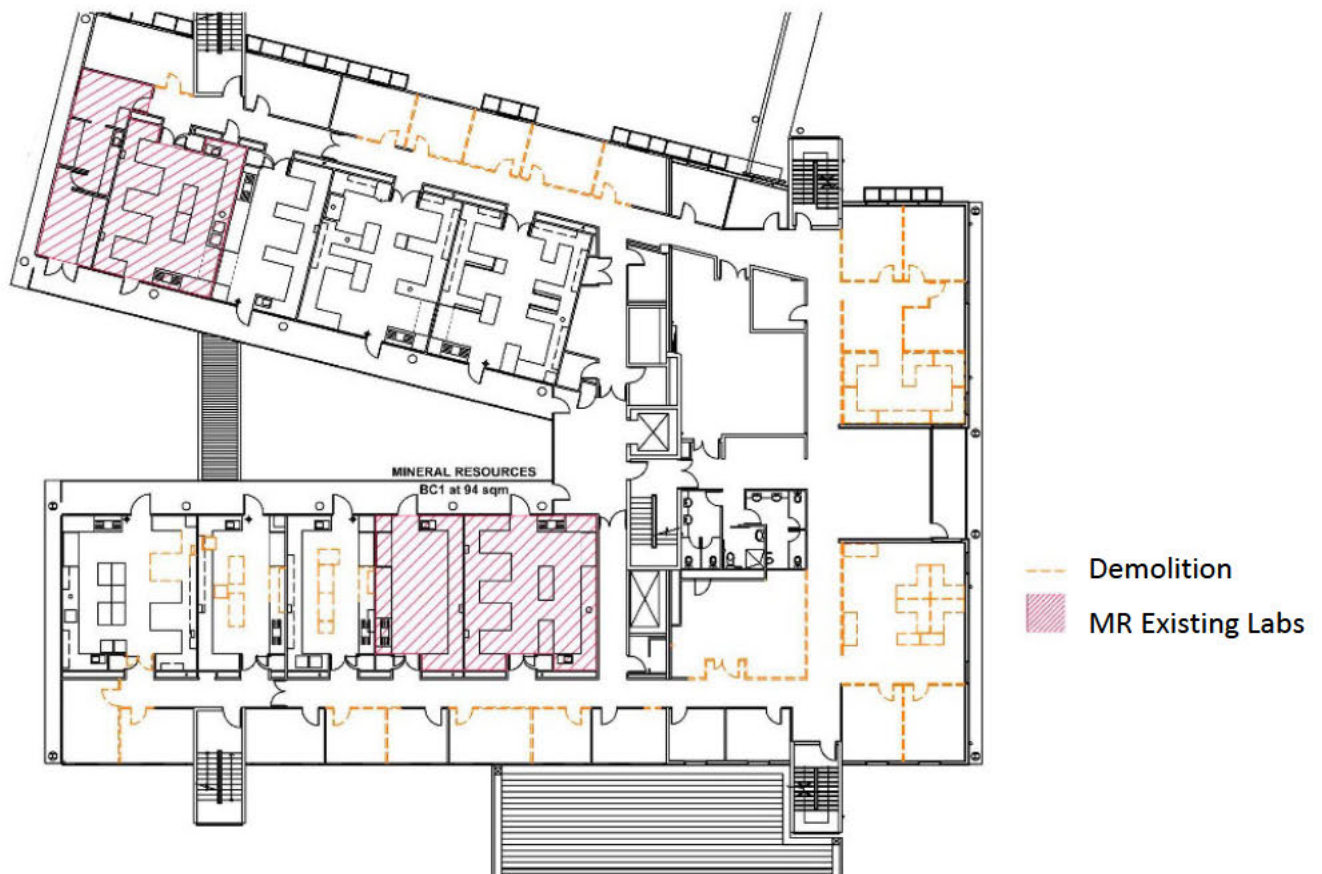
Waterford Proposed Plan – Building 1, Level 2



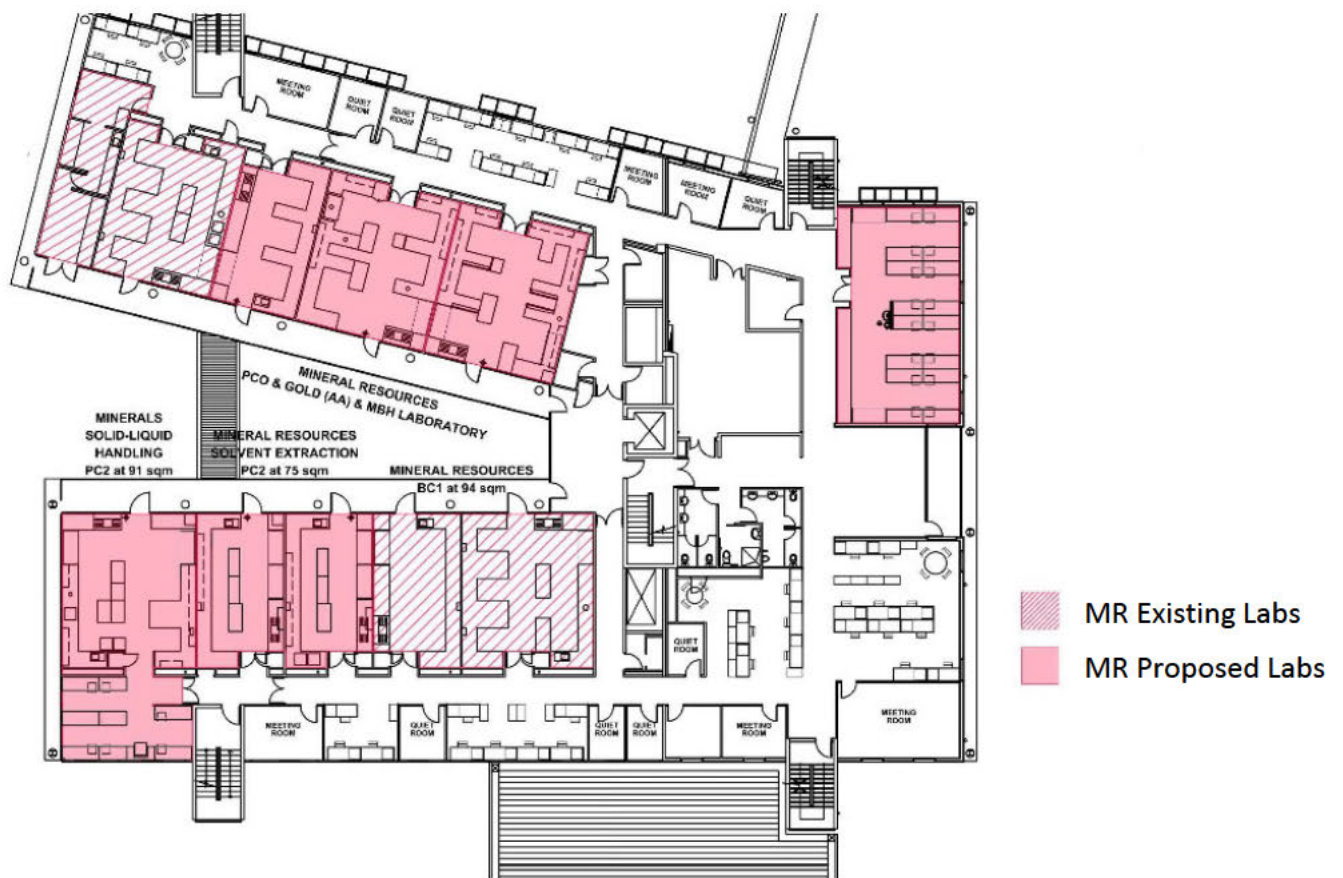
Waterford Existing Plan – Building 1, Level 3



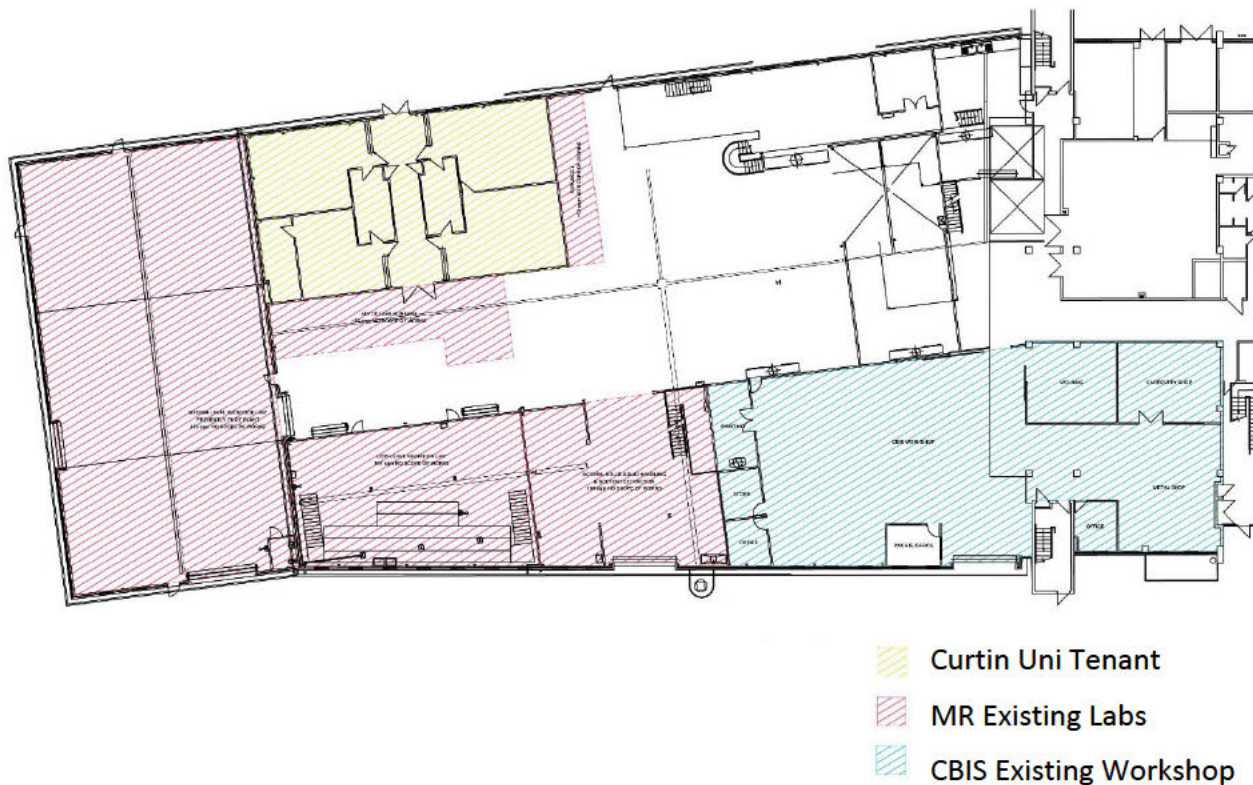
Waterford Demolition Plan – Building 1, Level 3



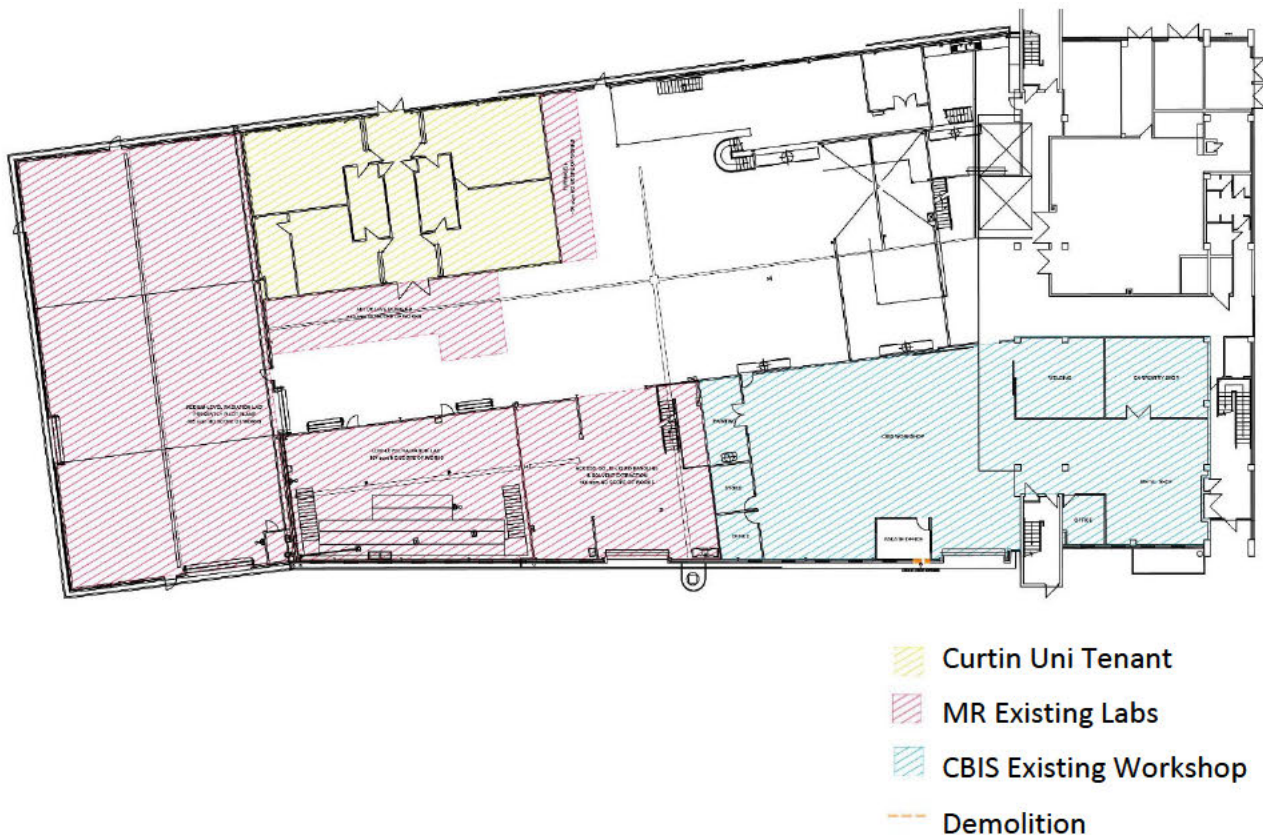
Waterford Proposed Plan – Building 1, Level 3



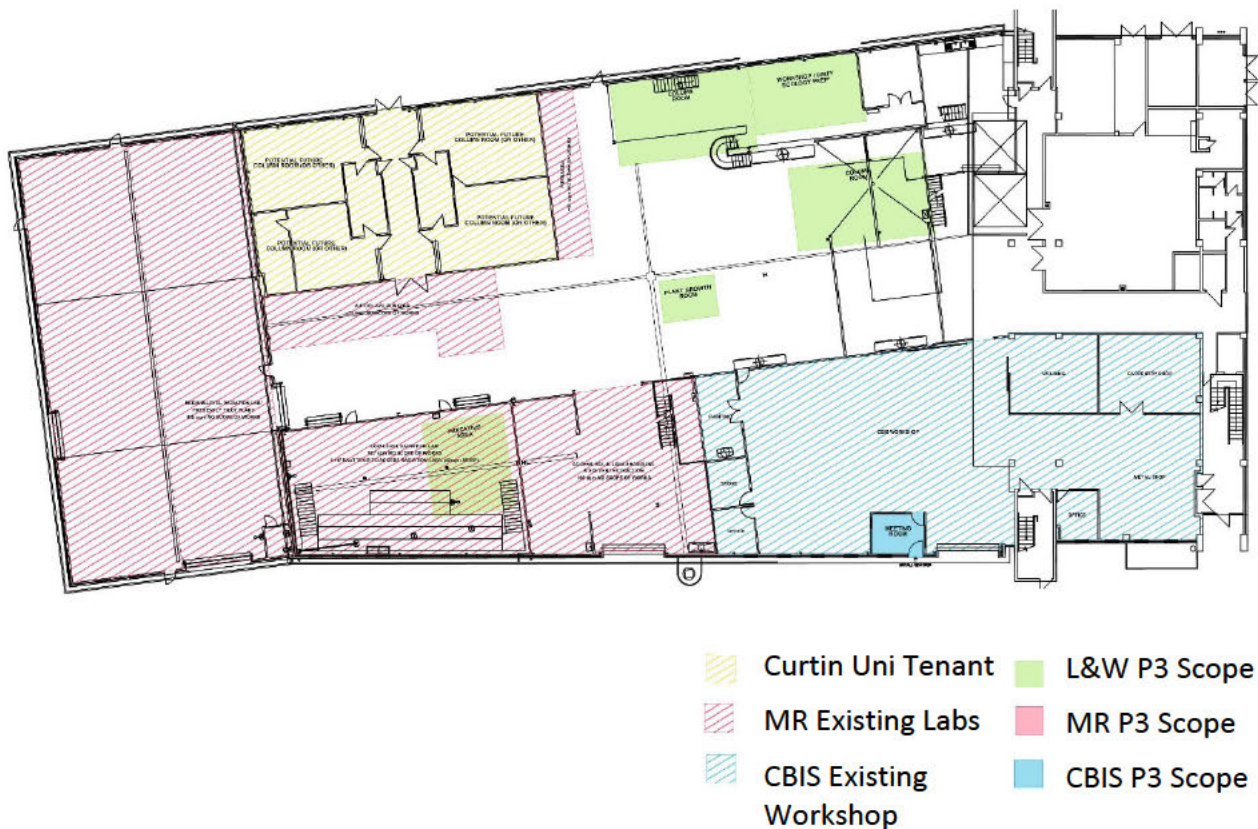
Waterford Existing Plan – Building 2, Ground Floor



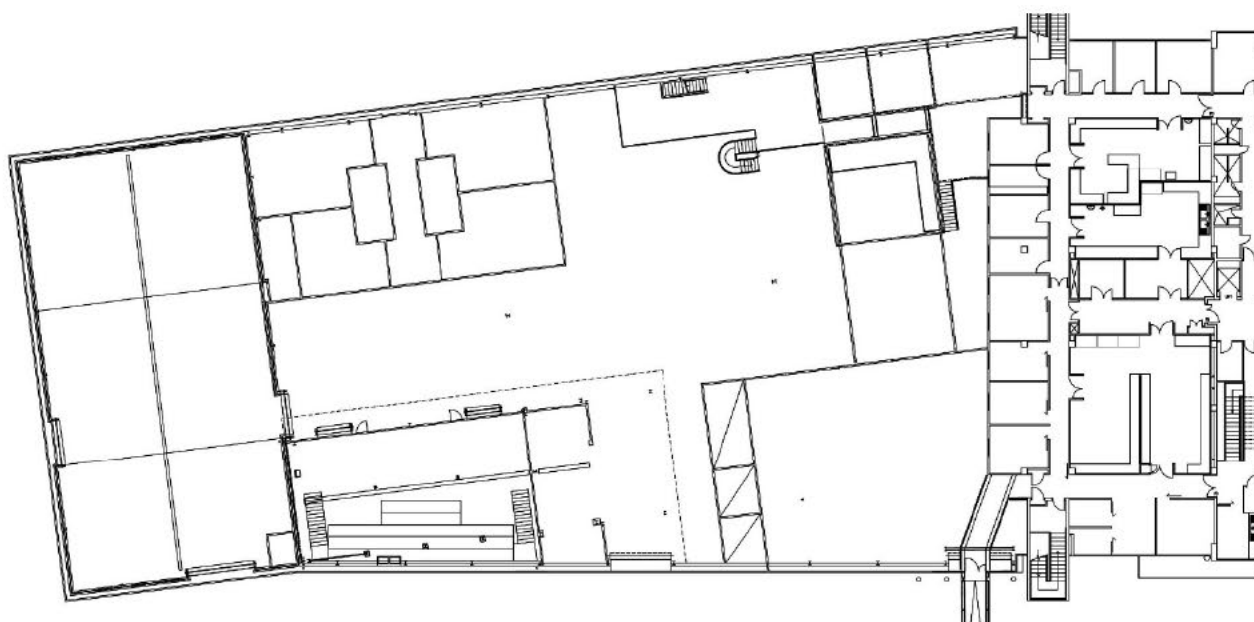
Waterford Demolition Plan – Building 2, Ground Floor



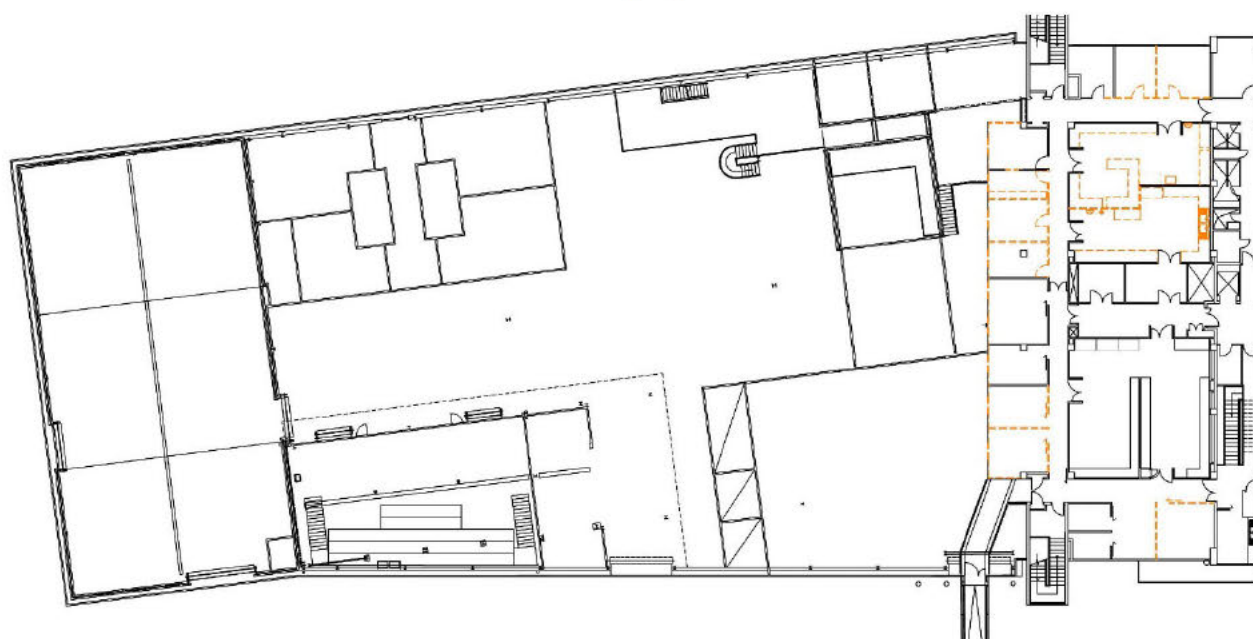
Waterford Proposed Plan – Building 2, Ground Floor



Waterford Existing Plan – Building 2, Mezzanine

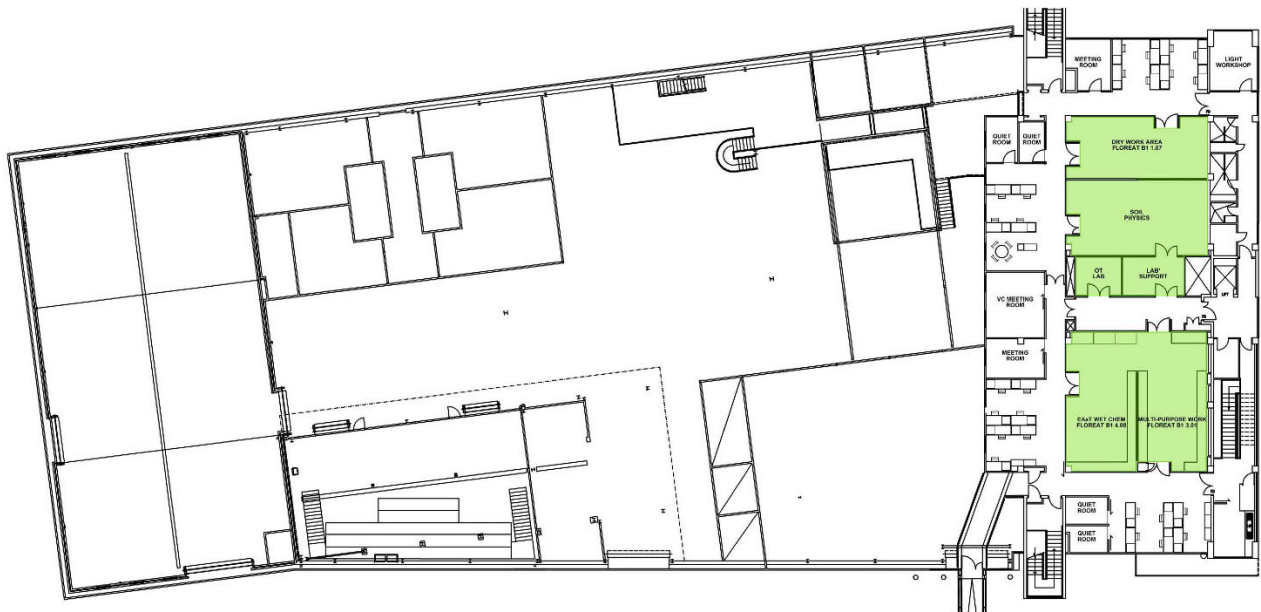


Waterford Demolition Plan – Building 2, Mezzanine



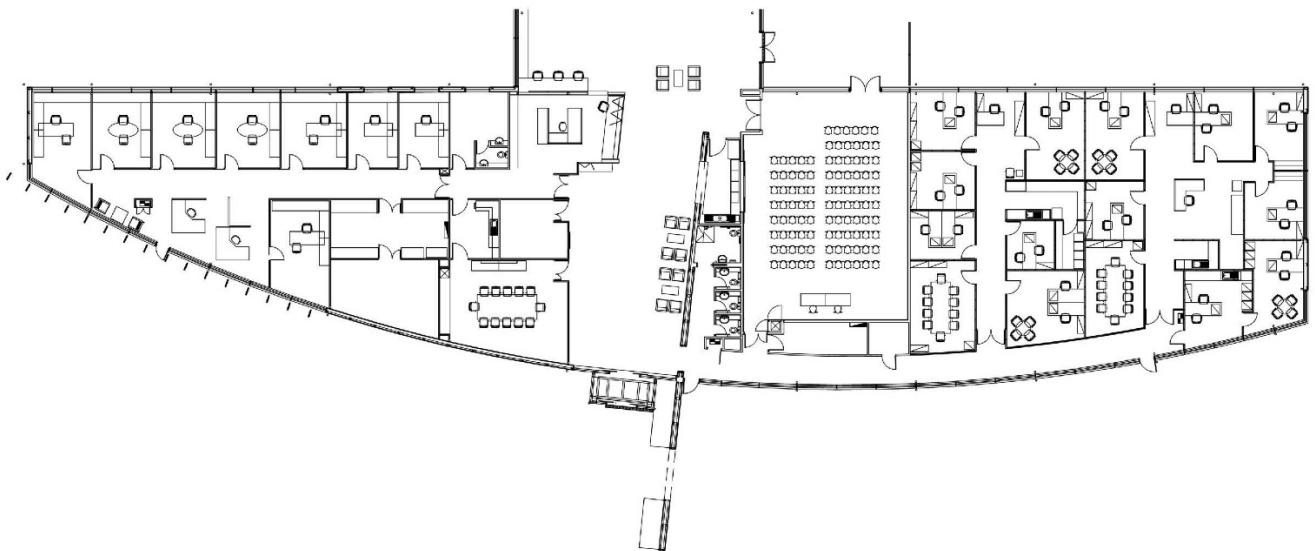
— Demolition

Waterford Proposed Plan – Building 2, Mezzanine



■ L&W P3 Scope

Waterford Existing Plan – Building 10



Waterford Demolition Plan – Building 10



Waterford Proposed Plan – Building 10

