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# CONSTRUCTION & DEMOLITION WASTE MANAGEMENT PLAN

# **DAPTO LEAGUES CLUB, DAPTO, NSW 2530**

Part Demolition of Existing Building & Construction Additions and Internal Refurbishments

Prepared for: Integrated Projects

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Wollongong City Council Application #:



LIST OF FIGURES	3
INTRODUCTION	5
BACKGROUND AND EXISTING CONDITIONS	5
WASTE MANAGEMENT PRINCIPLES	8
STOCKPILING	9
DEMOLITION & CONSTRUCTION STAGE	10
Demolition Works	10
Construction Works	13
WASTAGE TYPES AND HANDLING	13
Table 1: Estimated Volumes of Demolition Waste and Recycling Options	14
Table 2. Estimated Volumes of Construction Waste and Recycling Options	
Table 3: Example Construction and Demolition Waste Disposal Facilities within 20km of the site	
APPENDIX A – ARCHITECTURAL PLANS	18
APPENDIX B – CONSTRUCTION AND DEMOLITION WASTE MANAGEMENT REGISTER	68



# List of Figures

Figure 1: Location of the Subject Site (© Google 2023)	6
Figure 2: Aerial View of the Subject Site (© Google 2023)	
Figure 3: Street View of the Subject Site (© Google 2023)	
Figure 4: Extent of Proposed Works, Dapto Leagues Club (Altus Architecture)	
Figure 5: Initial Demolition Waste Area; 6m <sup>3</sup> Skin Bins	
Figure 6: Construction and Demolition Recycling Signage	



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## Introduction

AusWide Consulting was commissioned by Integrated Projects to prepare a Construction and Demolition Waste Management Plan (WMP) for Council approval.

The proposed development consists of:

# **Development Details**

Part Demolition of Existing Building & Construction Additions and Internal Refurbishments

In the course of preparing this WMP, plans of the development have been examined, and all relevant council requirements and documentation collected and analysed.

This WMP has been prepared based on the following information:

- Architectural Plans provided by Altis Architecture
- Wollongong Local Environmental Plan 2009
- Wollongong Development Control Plan 2009.

# **Background and Existing Conditions**

Dapto Leagues Club is located on the corner of Station Street and Bong Bong Road, Dapto. The site is located across the road from Dapto Train Station (train station approximately 80 metres to the west). It is within the E1 – Local Centre zone within the town centre. To the north of the site consists of residential lots within an R3 – Medium Density Residential zone, to the east consists of businesses in an E2 – Commercial Centre zone, and to the south consists of industrial units in an E4 – General Industries zone. The site currently consists of the existing Leagues Club building and its ancillary facilities.

**Figure 1** on page 6 provides an overview of the area, and its surrounding land uses whilst **Figure 2** provides an aerial view of the immediate area surrounding the subject site. **Figure 3** on page 7 provides a street view of the subject site while **Figure 4** shows the extent of the demolition and construction works at the subject site.



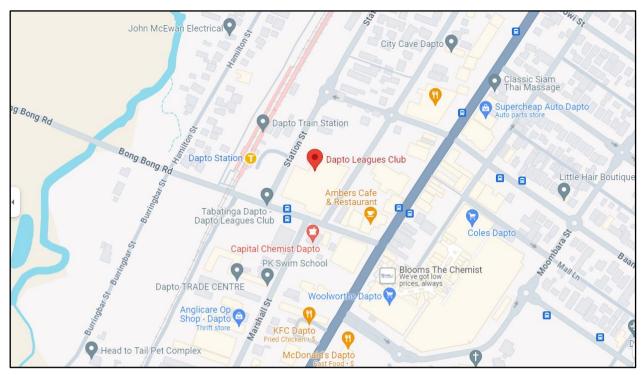


Figure 1: Location of the Subject Site (© Google 2023)

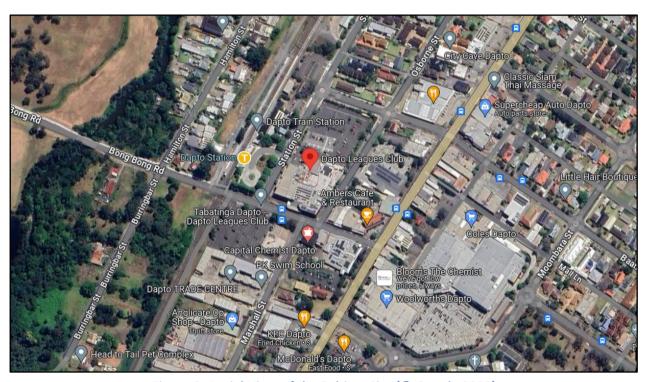


Figure 2: Aerial View of the Subject Site (© Google 2023)





Figure 3: Street View of the Subject Site (© Google 2023)



Figure 4: Extent of Proposed Works, Dapto Leagues Club (Altus Architecture)



# **Waste Management Principles**

When dealing with waste, the following hierarchy has been adopted from the Australian National Waste Policy, prioritising from top to bottom:



# Avoid/Reduce

Particularly during the construction phase, avoidance of waste will be achieved through:

- Selecting design options with the most efficient use of materials; and
- Selecting materials with minimal wastage, such as prefabricated materials.

#### Reuse

Some of the materials encountered in the demolition and construction stages can be recovered and reused both on-site and off-site. This will be practised wherever possible. Reusable materials shall be appropriately stored to avoid damage from weather or machinery.

#### Recycle

Similarly, many materials from the demolition and construction stages will be recyclable. These materials will be identified prior to demolition, and a system incorporated to efficiently separate reusable materials, recyclable materials, and disposable materials. Recyclable materials shall be appropriately stored to avoid damage from weather or machinery. Details and receipts verifying the recycling of these materials shall be kept present on site at all times.

#### Recover/Treat

Processing of waste to recover resources, including energy, may be an option, with many waste companies processing demolition and construction waste before disposal. Some waste may also be treated to reduce its environmental impact before disposal.

#### **Disposal**

The waste disposal contractor chosen for the job will comply with Council's DCP. Details and receipts verifying the disposal of these materials shall be kept present on site at all times.



## Handling

When handling waste on-site, the system (including bin placement, volumes, and access) shall be designed with the following factors in mind:

- Safety (highest priority);
- Ease of use; and
- Aesthetics.

## Stockpiling

Waste sorting areas on-site during demolition and construction shall be adequately maintained. The material (demolition material, excavation material, construction material and waste) stockpiling area shall always remain within the site boundary and relocate during different demolition and construction stages as necessary. The waste area shall be largely located at the front of the site to provide access for waste collection vehicles via the site's entrance on Station Street. This is to maintain easy access and removal of waste. **Figure 5** shows an indicative location of the waste area during initial demolition stages. The stockpiling area shall not infringe on access to the site. The building site perimeter will have site fencing with shade cloth to reduce visibility of waste from the street.

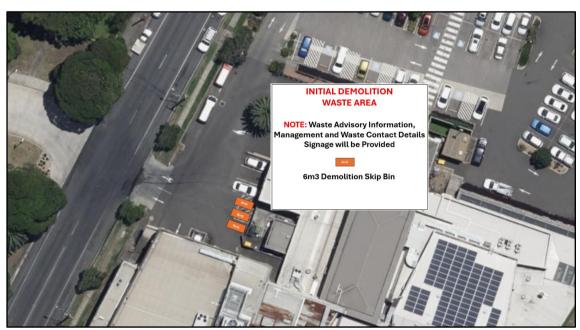


Figure 5: Initial Demolition Waste Area; 6m<sup>3</sup> Skin Bins



# **Demolition & Construction Stage**

The proposal involves the part demolition of the existing building on site and the construction of additions and internal refurbishments.

#### Demolition Works

It should be noted that the demolition stage has the greatest potential for waste minimisation.

The contractor should consider whether it is possible to re-use existing buildings, or parts thereof, for the proposed use. With careful onsite sorting and storage and by staging work programs it is possible to re-use many materials, either on-site or off-site.

Councils are typically seeking to move from the attitude of straight demolition to a process of selected deconstruction, i.e., total reuse and recycling both off-site and on-site. This could require a number of colour-coded or clearly labelled bins onsite (rather than one size fits all). **Figure 6** on page 11 shows source separation signage that will be installed in the waste areas during demolition and construction stages.









**Figure 6: Construction and Demolition Recycling Signage** 









Site contractors should demonstrate project management which seeks to:

- Re-use excavated material on-site and dispose of any excess to an approved site;
- Re-use green waste mulch in landscaping either on-site or off-site;
- Re-use bricks, tiles and concrete on-site as appropriate, or recycle off-site;
- Re-use plasterboard in landscaping on-site, or return to supplier for recycling;
- Re-use framing timber on-site or recycle elsewhere;
- Recycle windows, doors and joinery off-site;
- Recycle plumbing, fittings and metal elements off-site;
- Dispose of all asbestos, hazardous and/or intractable wastes in accordance with Workcover Authority and EPA requirements;
- Identify locations of on-site storage facilities for material to be reused on-site, or separated for recycling off-site; and
- Identify destination and transportation routes of all materials to be either recycled or disposed of off-site.

All appropriately licenced and experienced demolition contractors will follow the requirements of AS2601-2001 – *Demolition of Structures*. Contractors will have developed work plans for their demolition activities including procedures for identification of any hazardous materials, demolition methods, and the precautions to be employed to minimise any dust nuisance and the disposal methods for hazardous materials. These documents should preferably be contained in an audited quality control system, submitted with the tender documents, and the quality of the documentation should be key determining factor in assessing demolition contractors.



#### Construction Works

The following measures shall be considered during the construction stage in order to save resources and minimise waste:

- Purchasing Policy i.e., ordering the right quantities of materials and prefabrication of materials where possible;
- Reusing formwork;
- Minimising site disturbance, limiting unnecessary excavation;
- Careful source separation of off-cuts to facilitate re-use, resale, or efficient recycling; and
- Co-ordination/sequencing of various trades.

# Wastage Types and Handling

Waste volumes produced by demolition and construction stages are estimated in the following **Tables 1 & 2**.

Where possible, materials shall be reused or recycled, with disposal being the last resort. The destination of all recycled and disposed material shall be announced upon the selecting the waste collectors and recyclers.

The arrangements for all reused, recycled and disposed waste shall be tracked and recorded, and all receipts shall be held on-site.

It is noted that the quantities of materials detailed in this section are estimates only, based on current industry standards and quantity analysis, and may vary due to the prevailing nature of construction constraints, weather conditions, and any other unforeseeable activities which are beyond the control of the developer, including but not being limited to theft, accidents, and other acts of misadventure. Notwithstanding any of the above, the developer will provide Council with all details in relation to any major variations in this regard.



Table 1: Estimated Volumes of Demolition Waste and Recycling Options

Materials on Site	Waste Estimate - Volume (m³) or Weight (T)	On-Site Reuse	Off-Site Recycling	Off-Site Disposal (Accordance with NSW EPA)
Asphalt	50 tonnes	No	Yes See Table 3	See Table 3
Bricks	200 tonnes	No	Yes See Table 3	See Table 3
Ceramic Tiles	3 tonnes	No	Yes See Table 3	See Table 3
Timber	25 tonnes	No	Yes See Table 3	See Table 3
Concrete	480 tonnes	No	Yes See Table 3	See Table 3
Metals	175 tonnes	No	Yes See Table 3	See Table 3
Excavation Material	746 tonnes	No	Yes See Table 3	See Table 3
Green Waste	<5 tonnes	No	Yes See Table 3	See Table 3
Glass (Windows)	15 tonnes	No	Yes See Table 3	See Table 3
Plasterboard	6 tonnes	No	Yes See Table 3	See Table 3
Other	30 tonnes	No	No	See Table 3



#### **Construction Phase**

If sound construction management practices are in place, then waste volumes should be minimised with the majority of this waste being recyclable.

Table 2. Estimated Volumes of Construction Waste and Recycling Options

Materials on Site	Waste Estimate- Volume (m³) or Weight (T)	On-Site Reuse	Off-Site Recycling
Asphalt	3 tonnes	No	Yes
Bricks	8 tonnes	Yes - Up to 20% as splits	Yes
Ceramic Tiles	3 tonnes	Minimal	Yes
Timber	2 tonnes	Yes – Up to 20% as offcuts, bracing, etc	Yes
Concrete	5 tonnes	No	Yes
Metals	3 tonnes	No	Yes
Plaster Board	1 tonne	No	Yes
Packaging Plastics	<1 tonne	No	Yes
Packaging Paper/Cardboard	1 tonne	No	Yes
Other	<1 tonne	No	No

**Table 3** (Page 16) details waste facilities within 20 kilometres of the site that accept various types of construction and demolition waste that may be generated from the worksite. These recycling facilities should be able to recover 80 to 90% of the materials from mixed demolition and construction waste.



Table 3: Example of Construction and Demolition Waste Disposal Facilities within 20km of the site

Facility Name	Facility Address	Materials Accepted
		Aluminium, Asphalt &
		Bitumen, Bricks, Ceramics,
		Concrete, Copper, Corrugated
		Iron, Electrical Cables, Garden
Pingo Pocycling Contro	50 Wyllie Road, Kembla	Cuttings, Glass Sheets, Iron &
Bingo Recycling Centre	Grange, NSW	Steel, MDF, Masonite &
		Villaboard, Other Metals,
		Pallets – Wood, Particleboard,
		Plasterboard, Sand, Solid Fill –
		Soil, Timber - Untreated
		Aluminium, Asphalt &
		Bitumen, Bricks, Cardboard,
		Ceramics, Concrete,
		Containers & Packaging,
		Copper, Corrugated Iron,
		Cylinders, Electrical Cables,
		Fibro – Non Asbestos, Foundry
Benedict Recycling	Five Islands Rd, Unanderra,	Sand, Garden Cutting, Glass
	NSW	Sheets, Iron & Steel, Lead,
		Mattresses, Office Furniture,
		Pallets – Plastic & Wood,
		Paper, Particleboard,
		Plasterboard, Plastic Straps,
		Sand, Shop Fittings, Soft
		Plastics, Solid Fill – Soil, Timber
		<ul><li>– Untreated, Tyres</li></ul>
SCE Decycling	Lot 1 Shellharbour Road,	Asphalt & Bitumen, Bricks,
SCE Recycling	Warrawong, NSW	Ceramics, Concrete, Sand

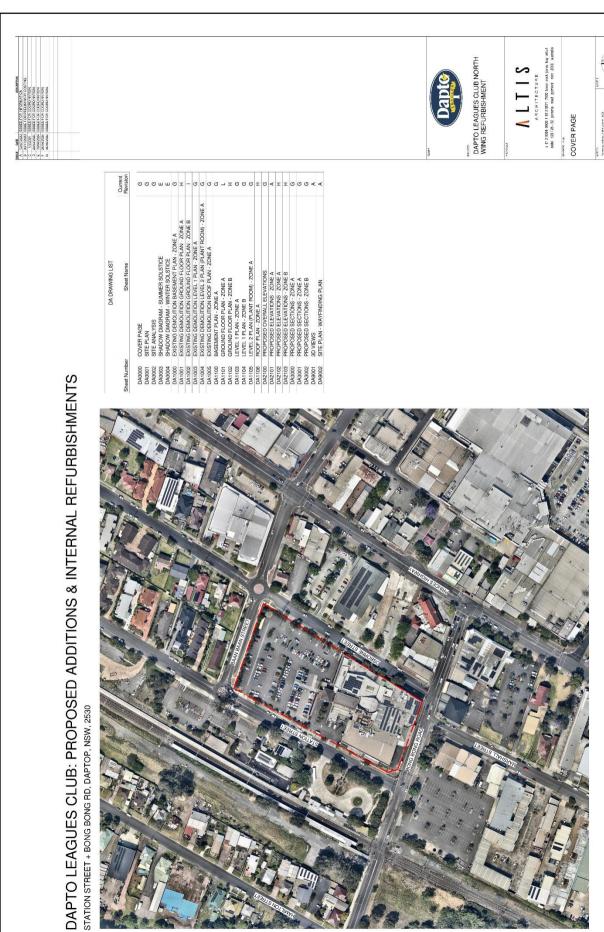


# **APPENDICES**



# APPENDIX A – Architectural Plans





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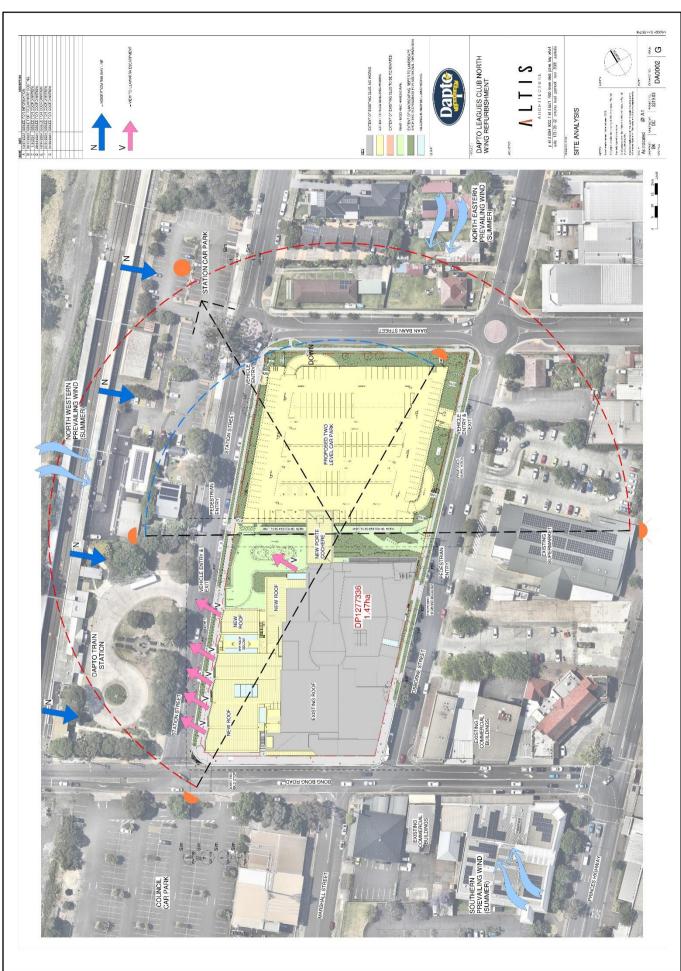




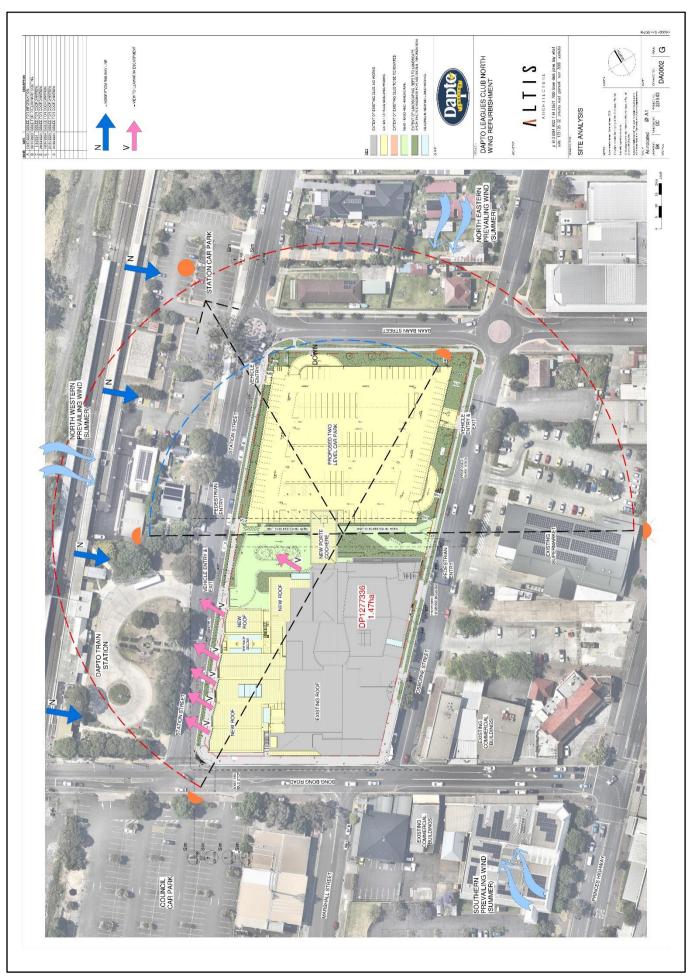




















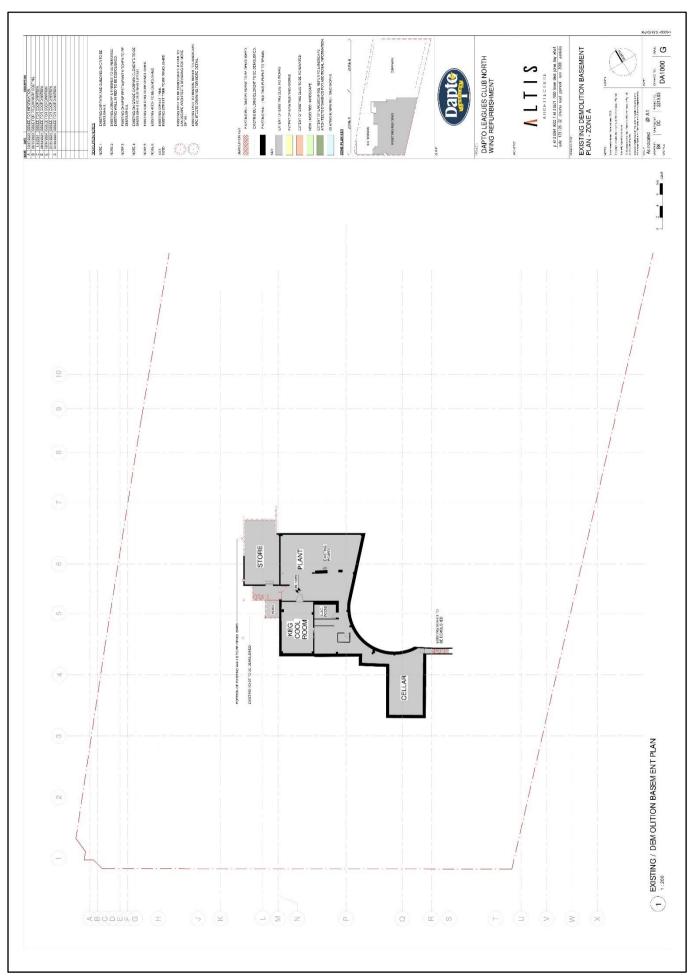




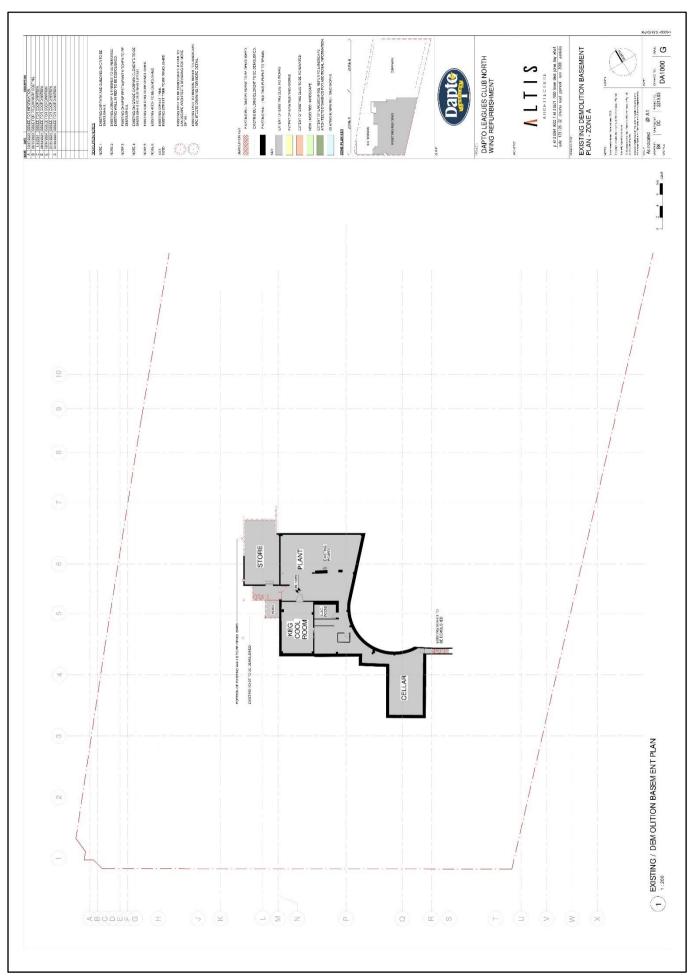




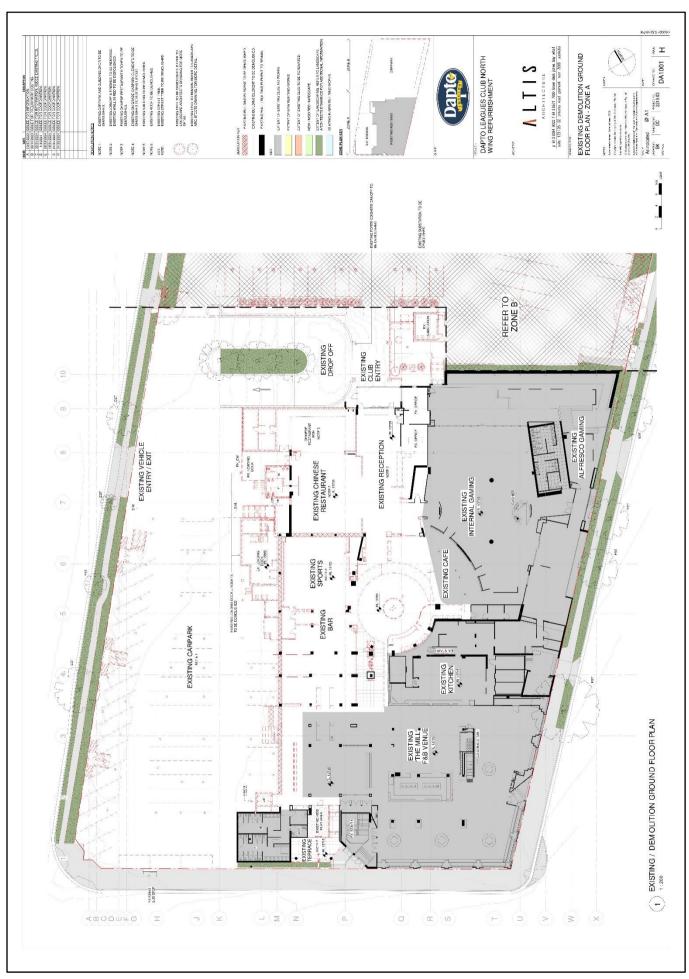




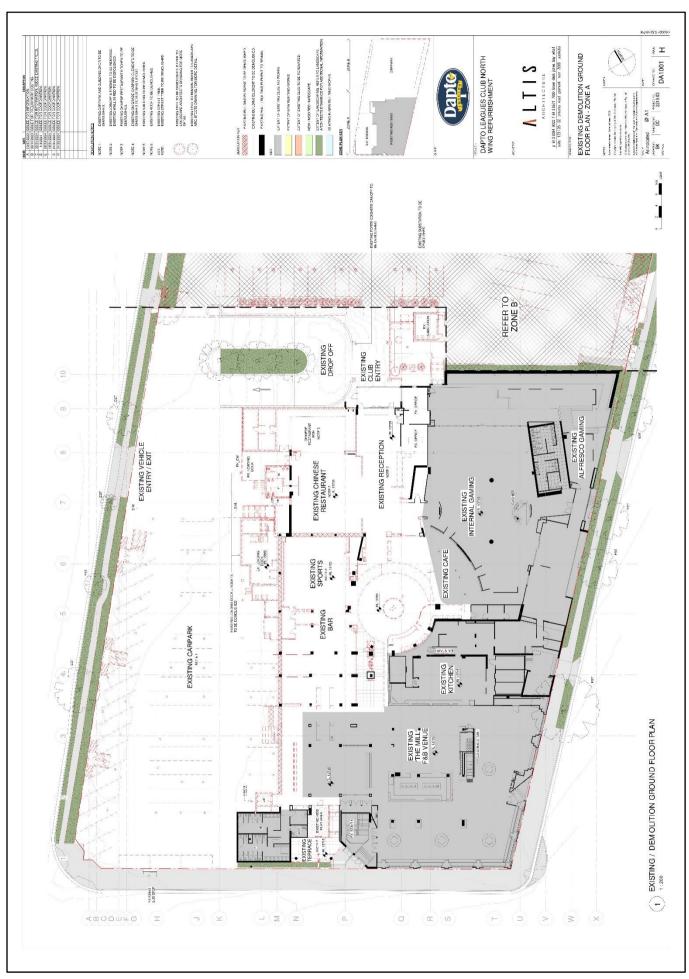




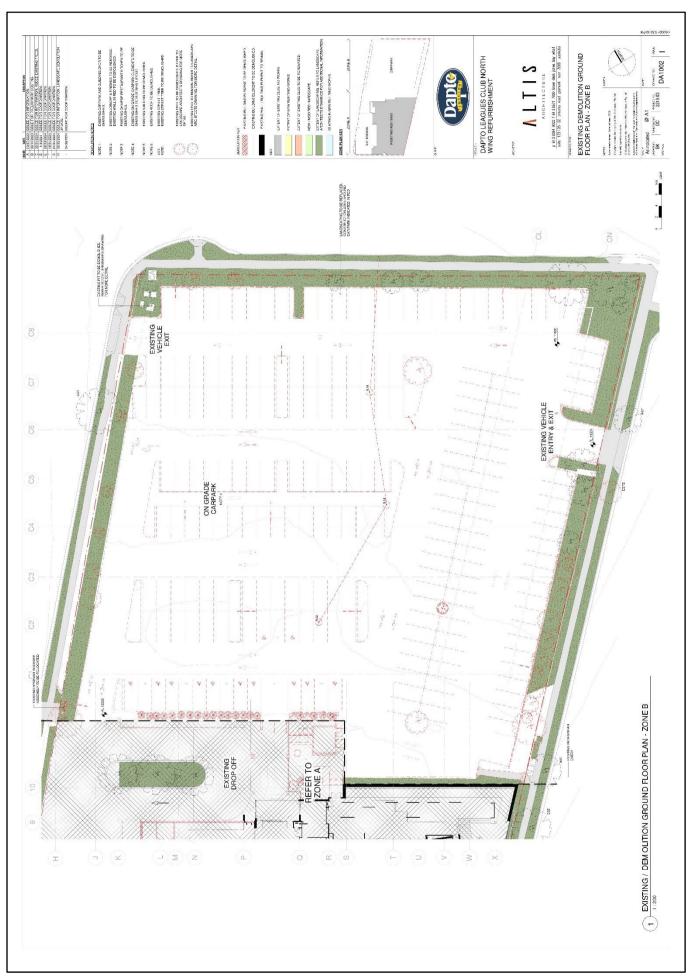




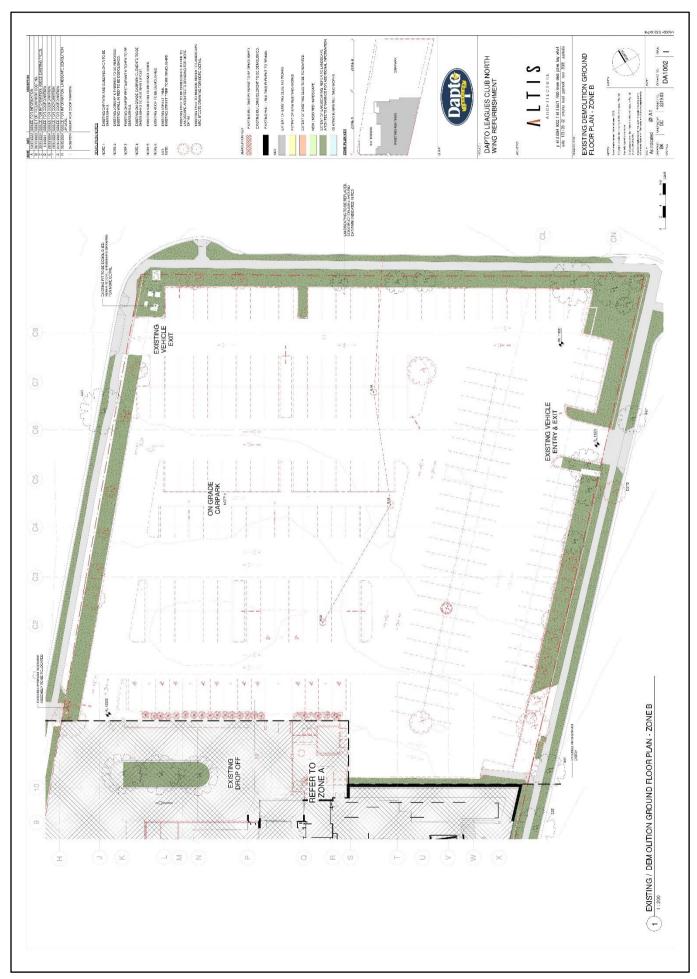




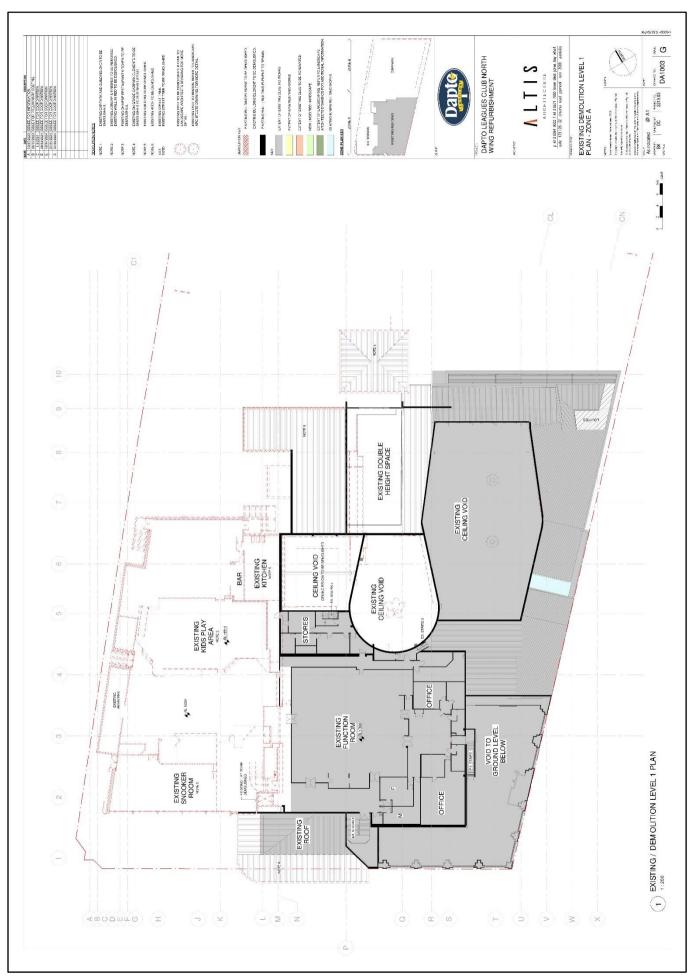




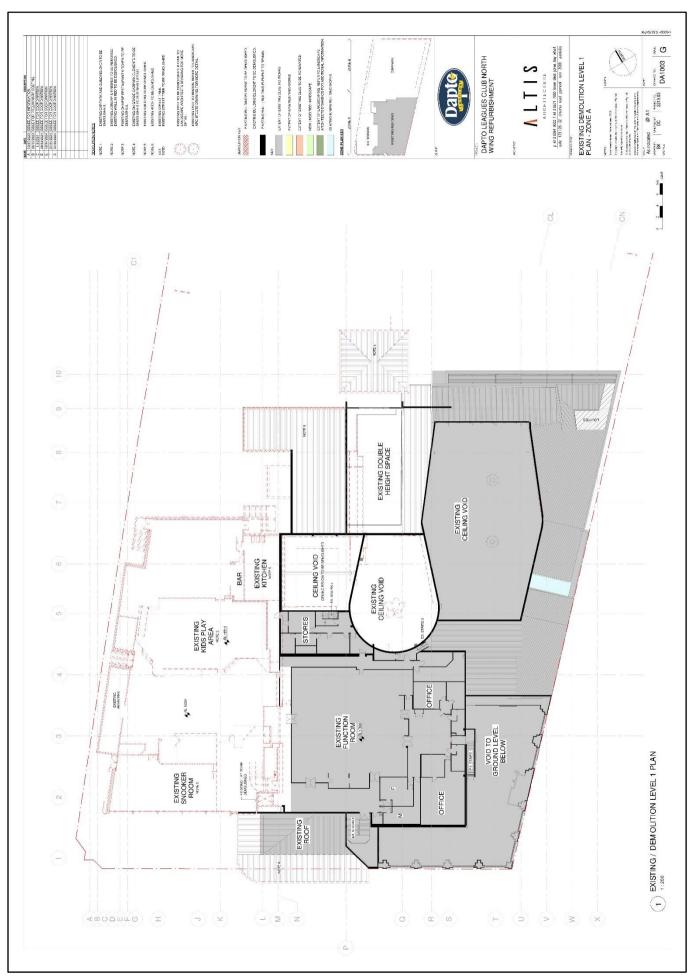




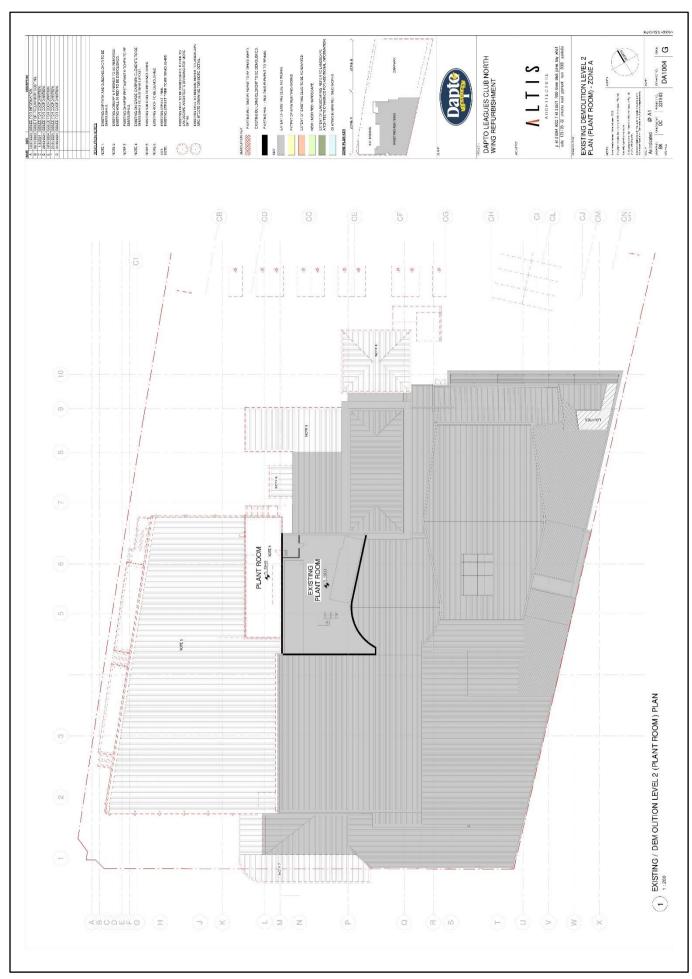




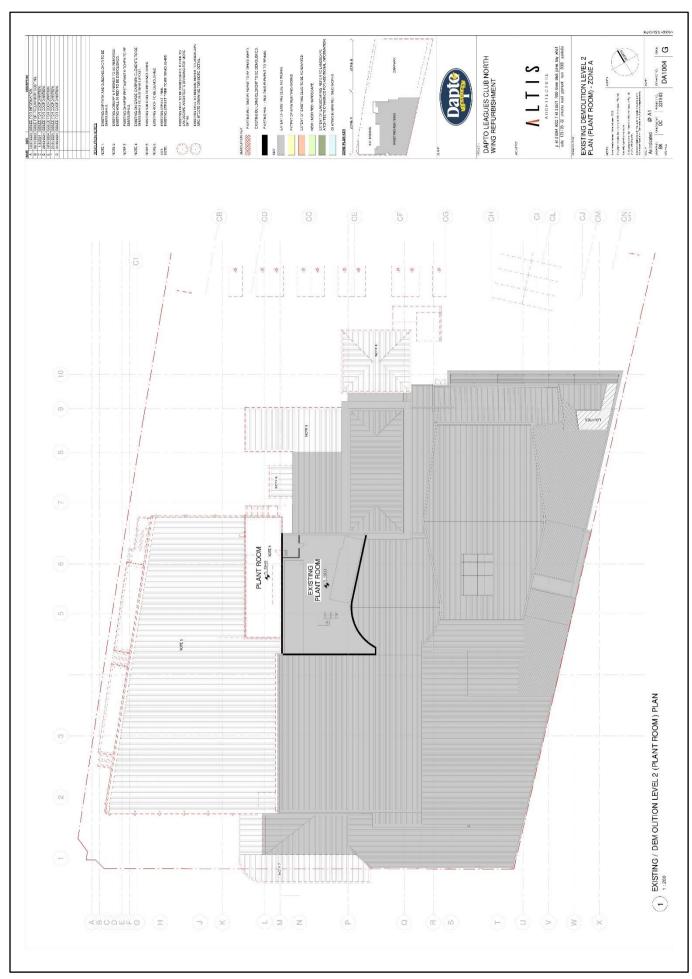




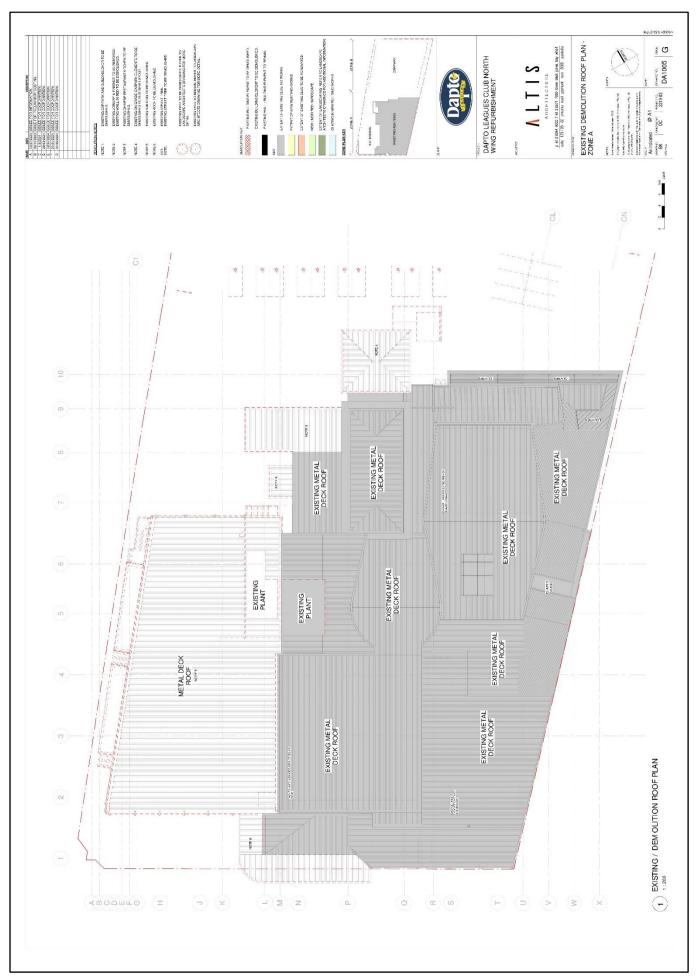




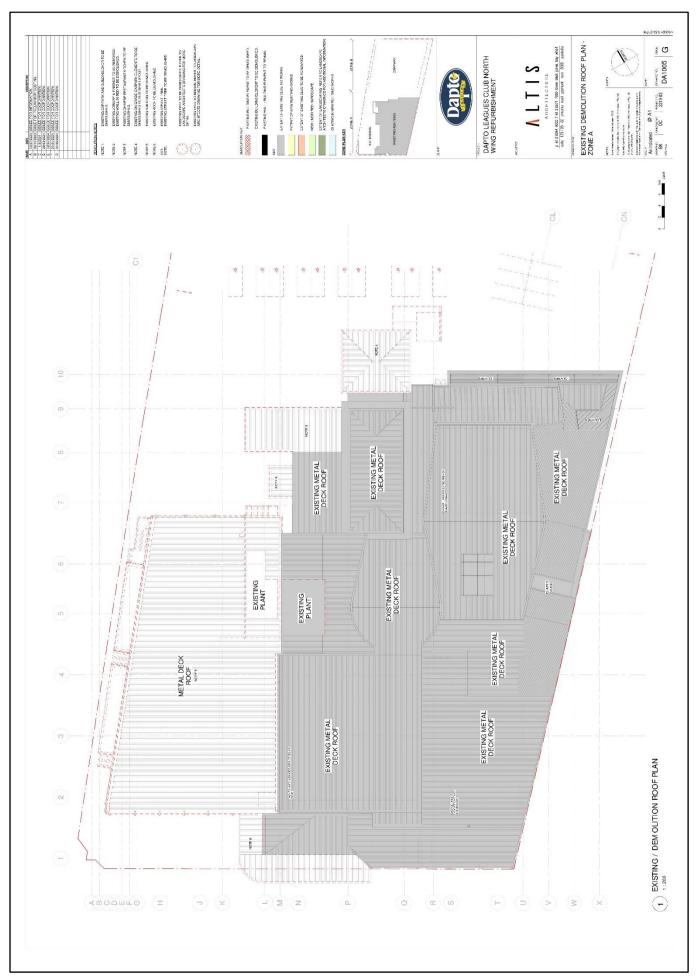




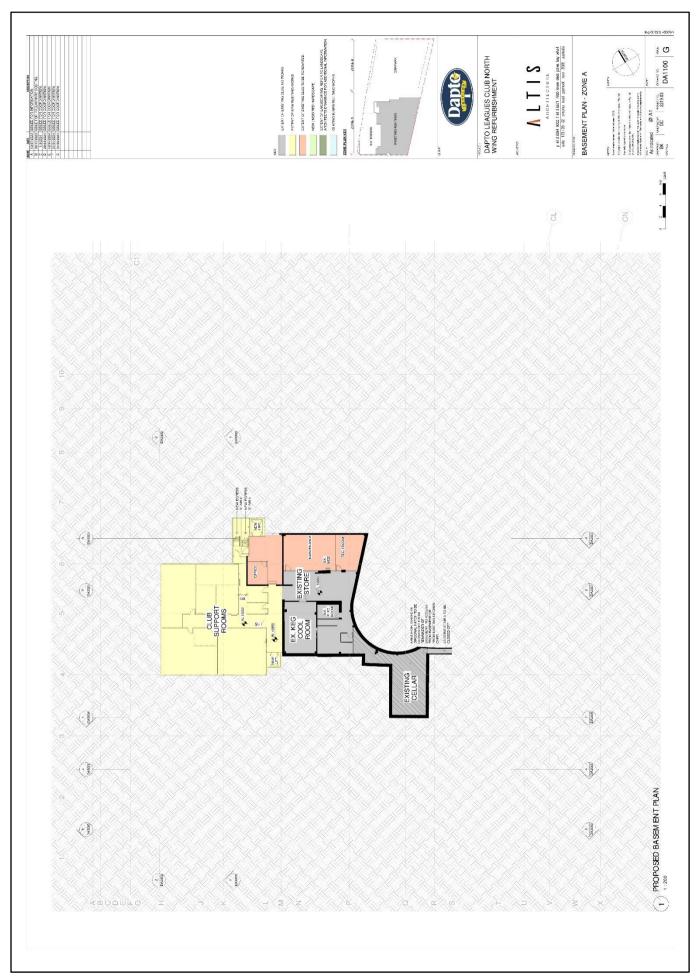




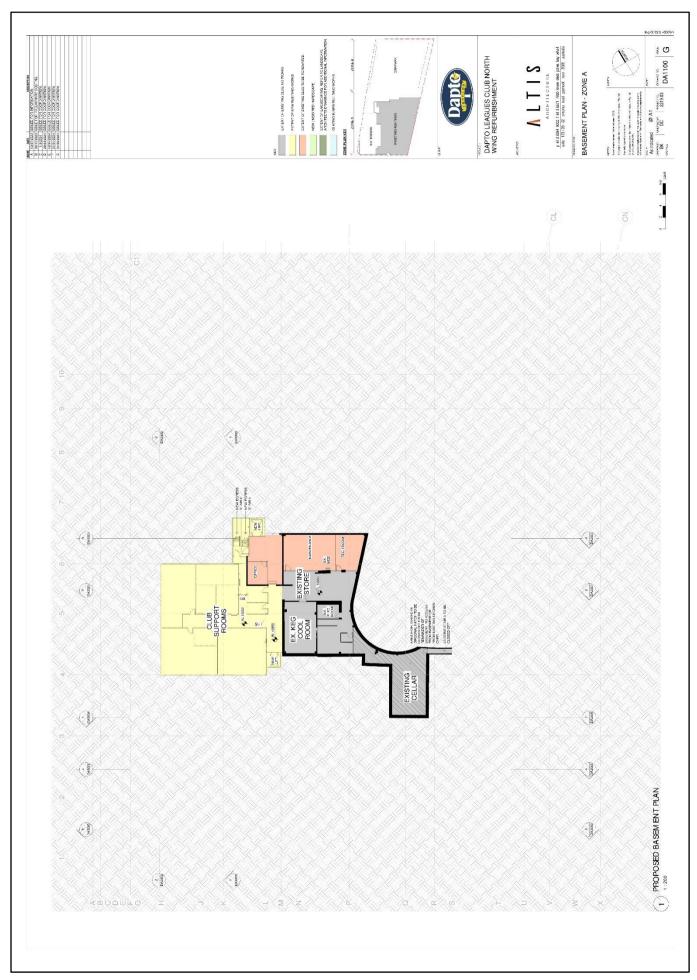




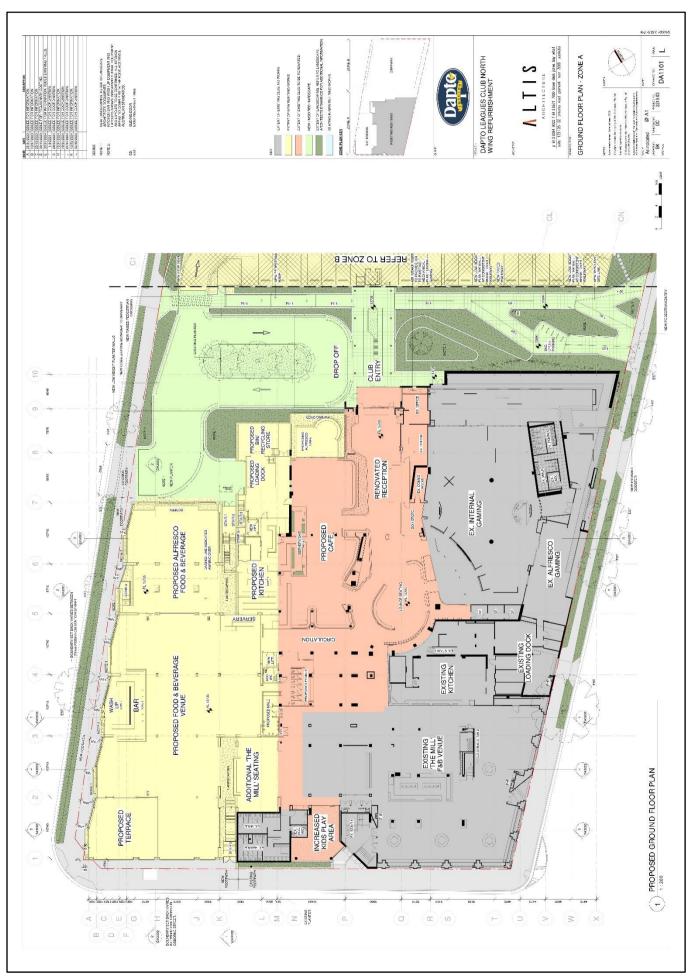




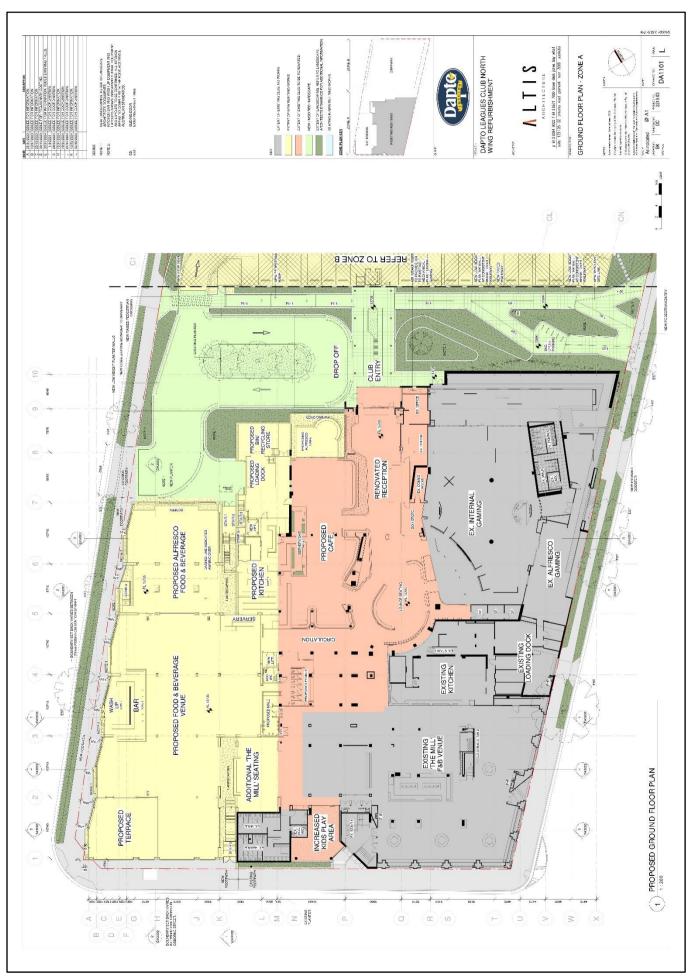




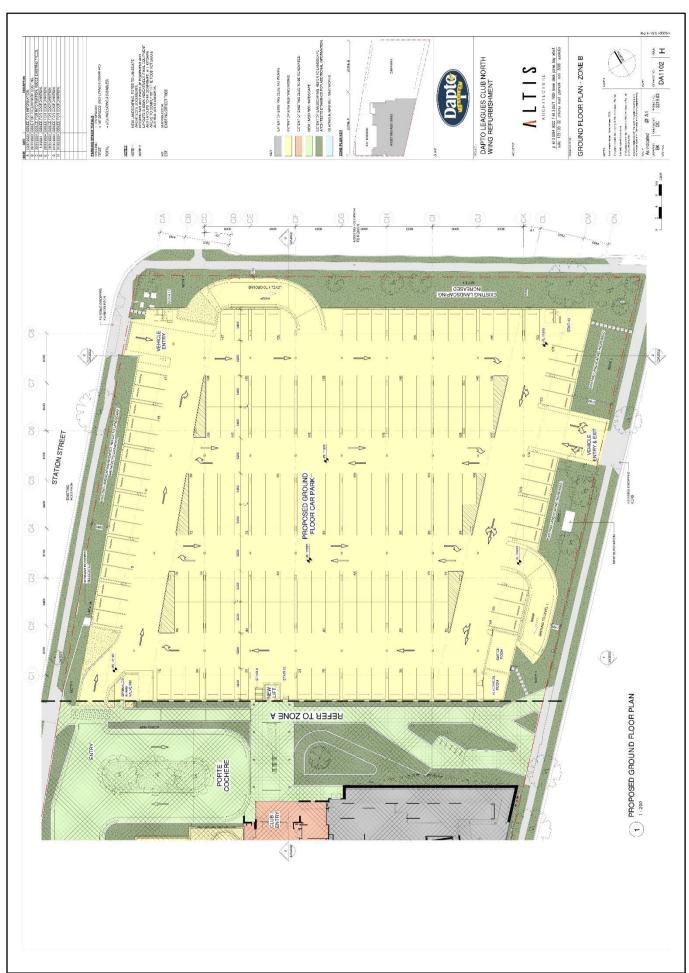




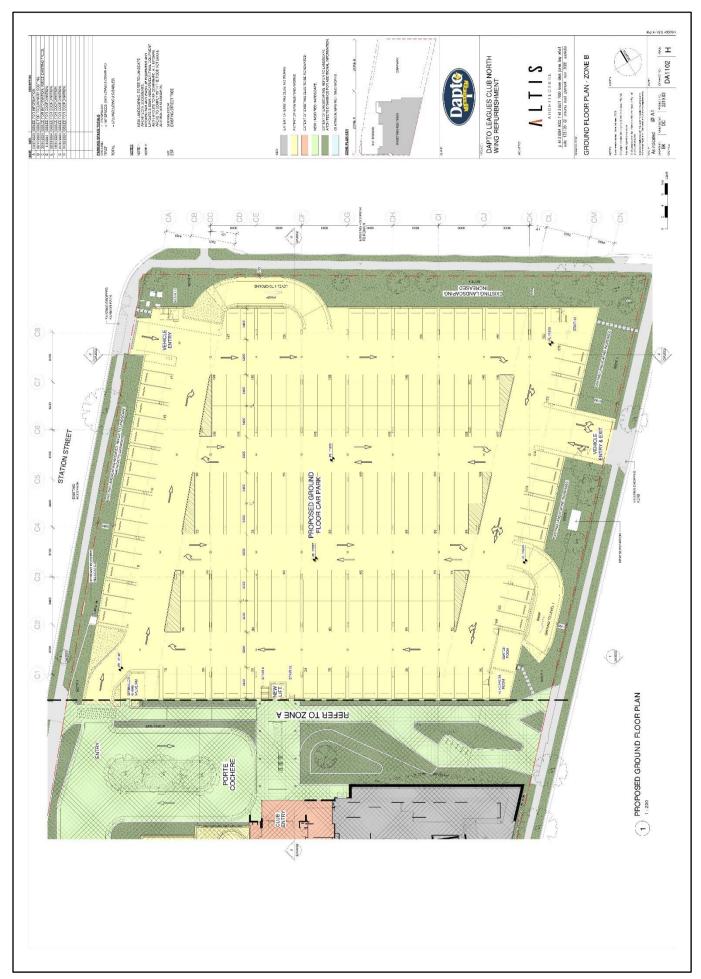




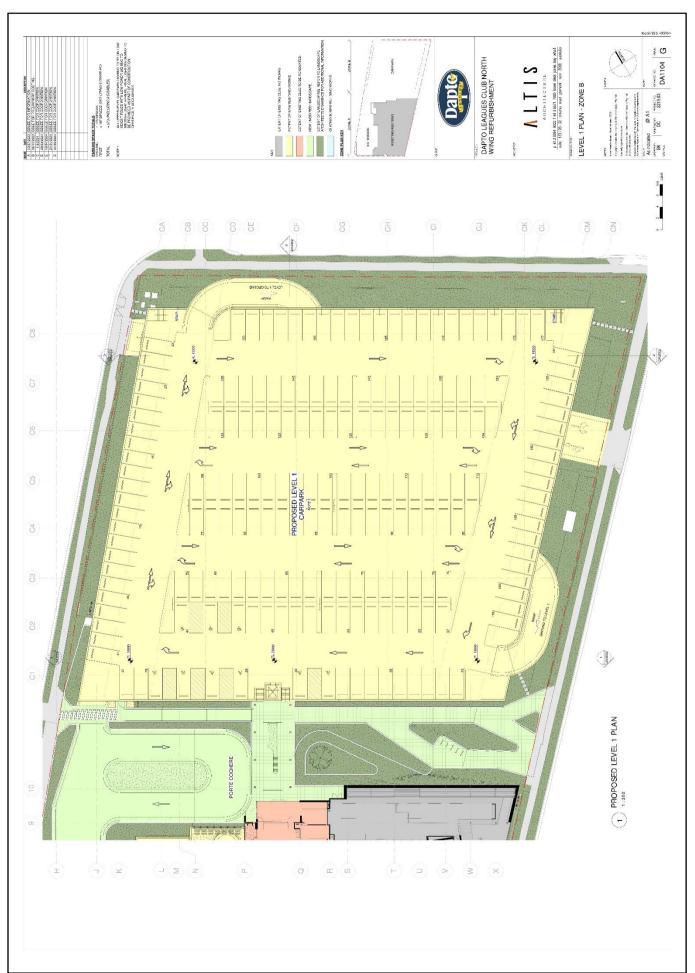








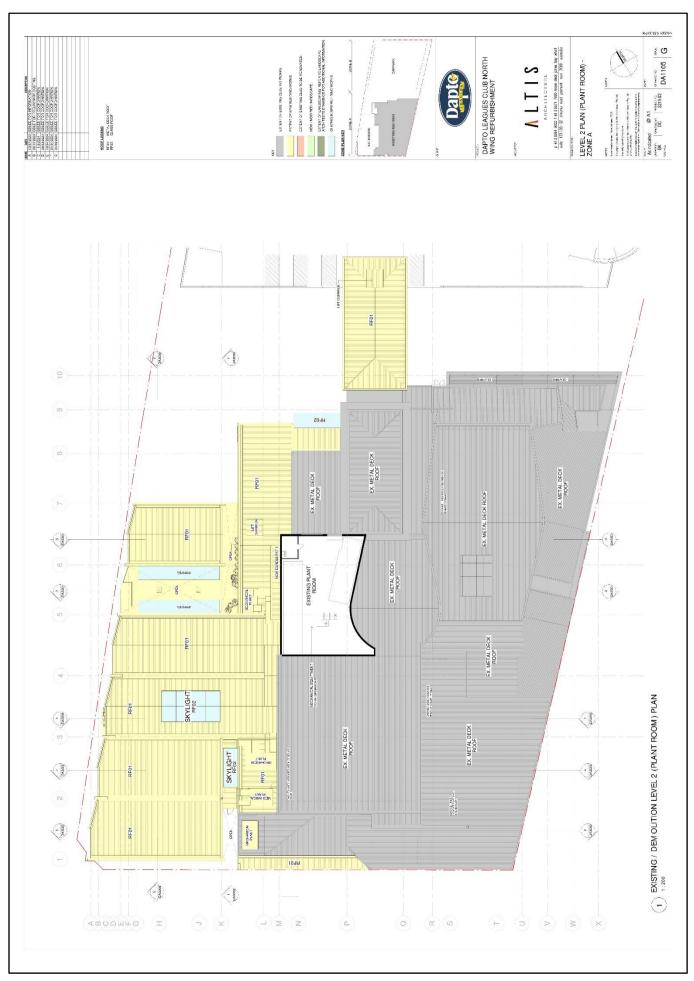




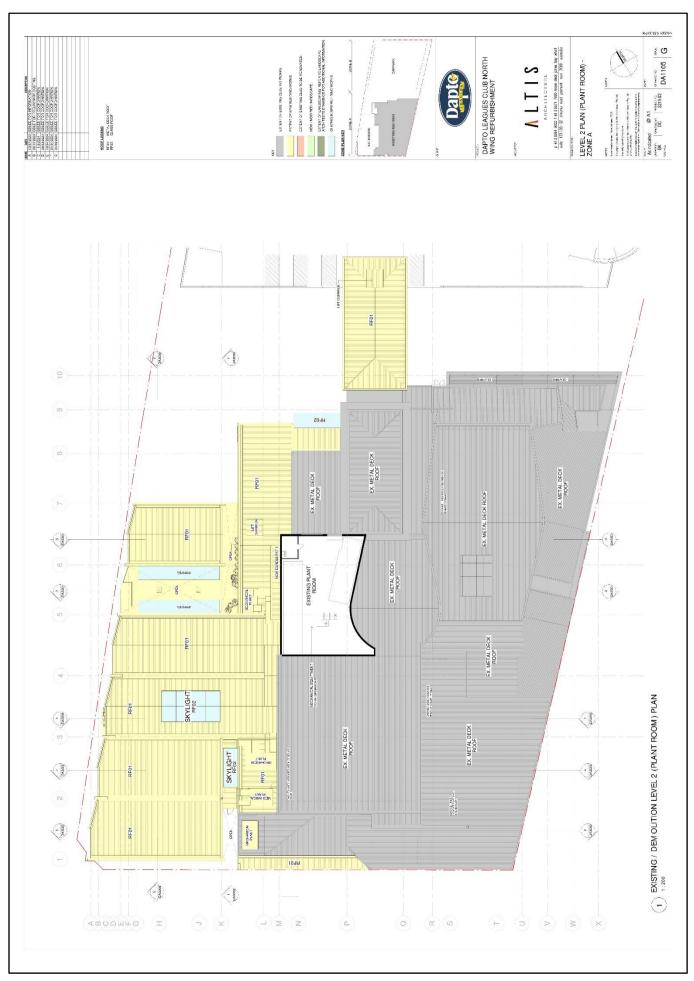












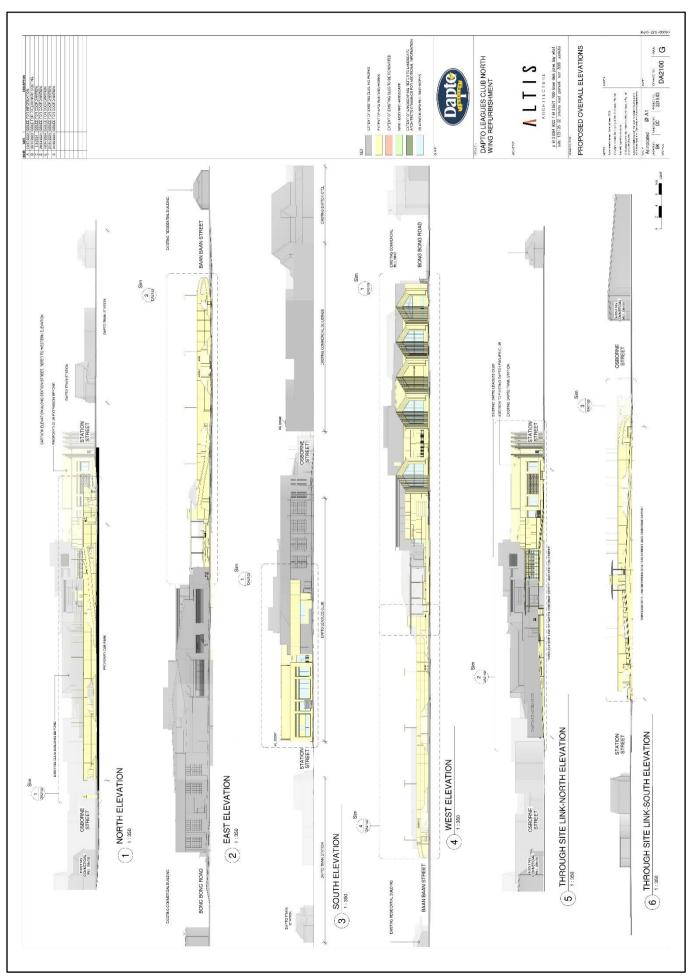












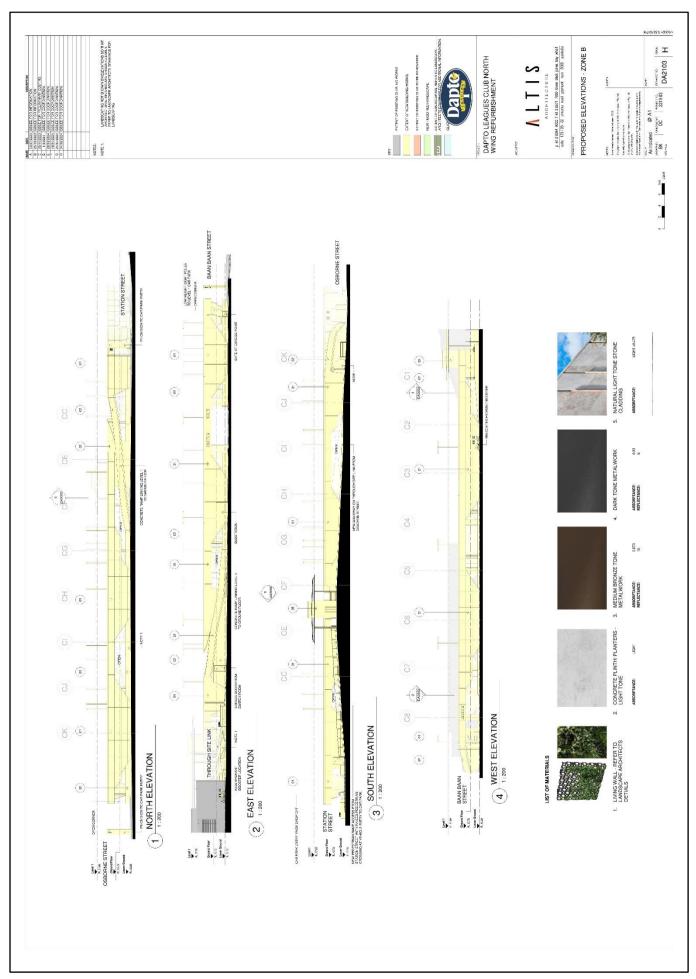




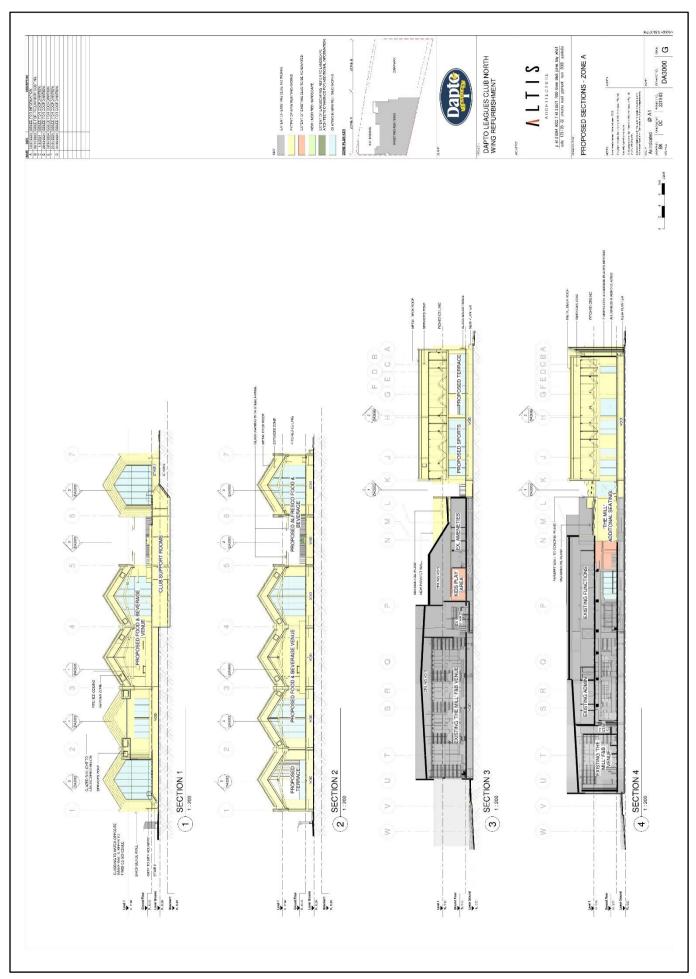




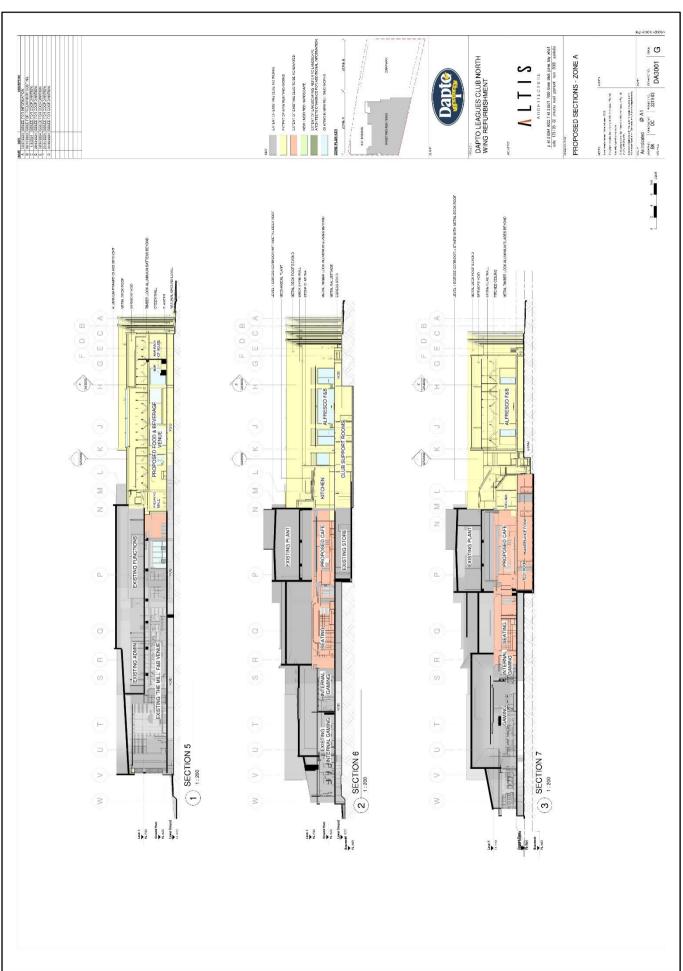




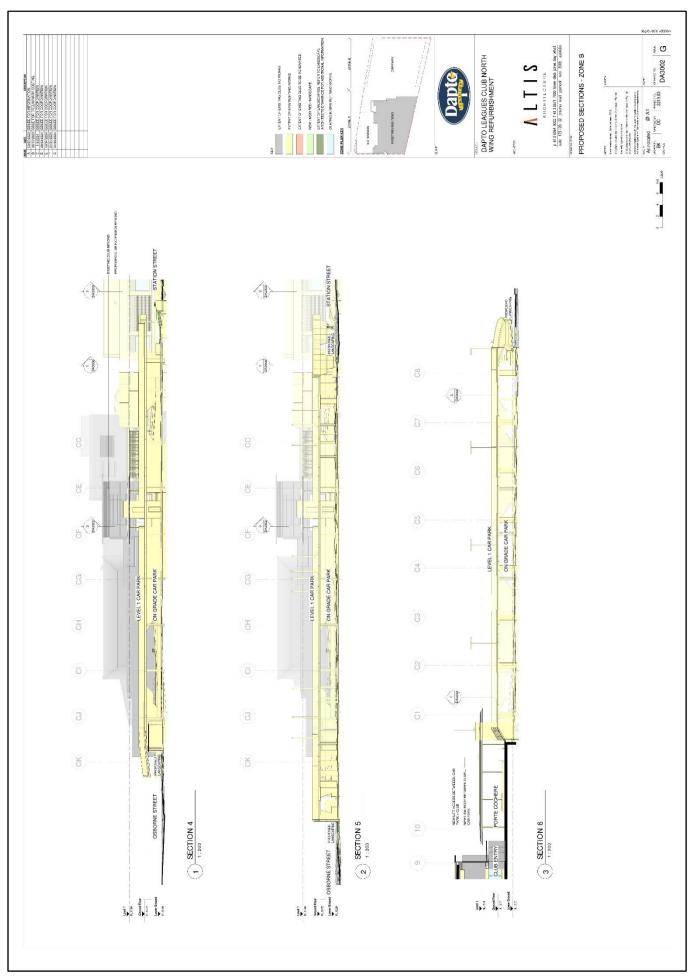




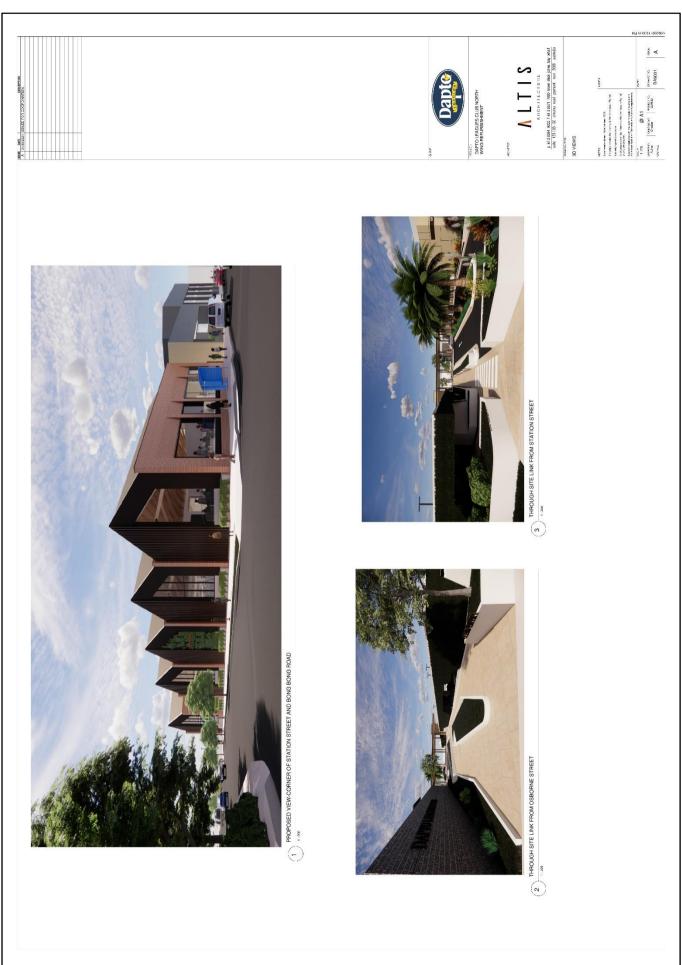




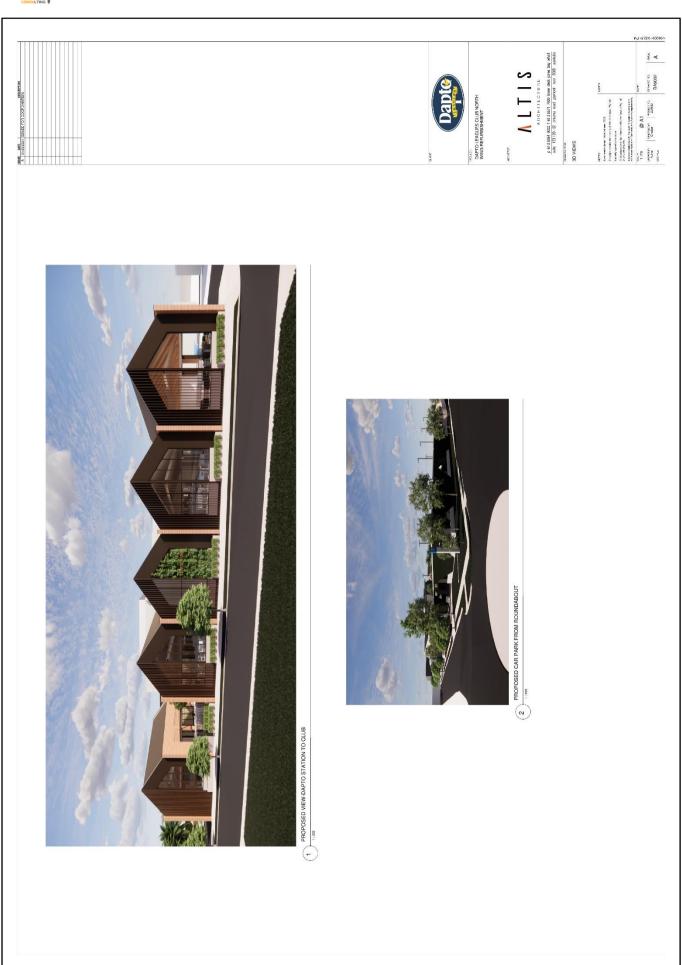




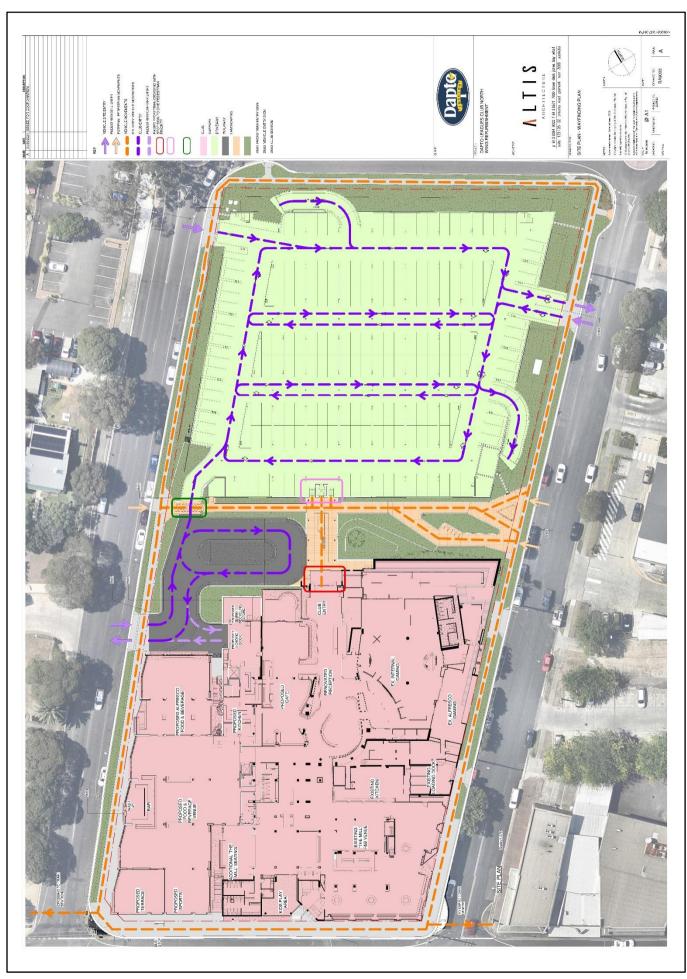




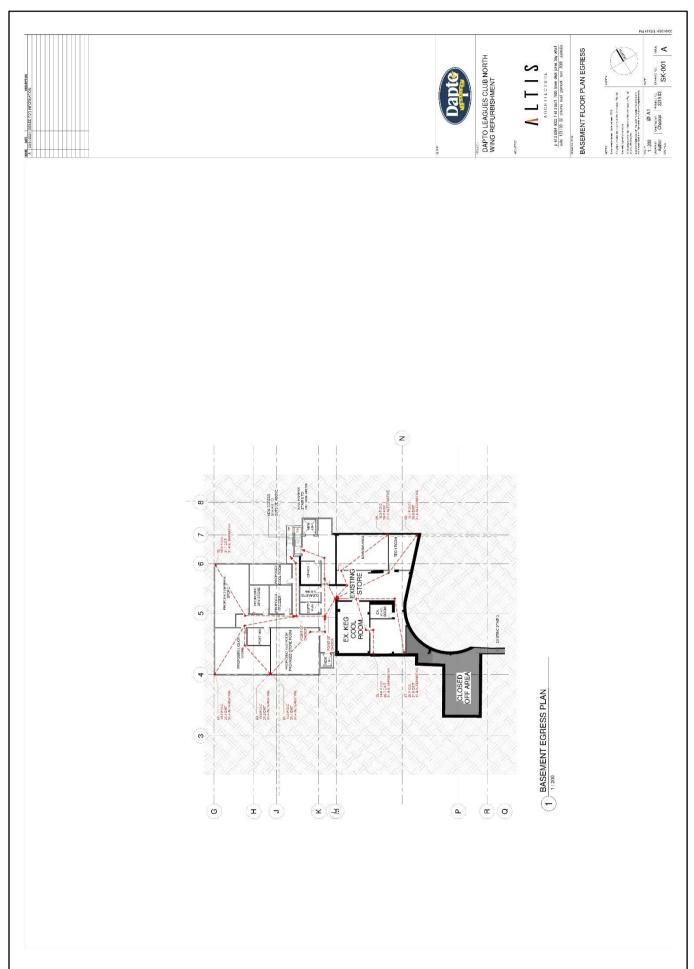




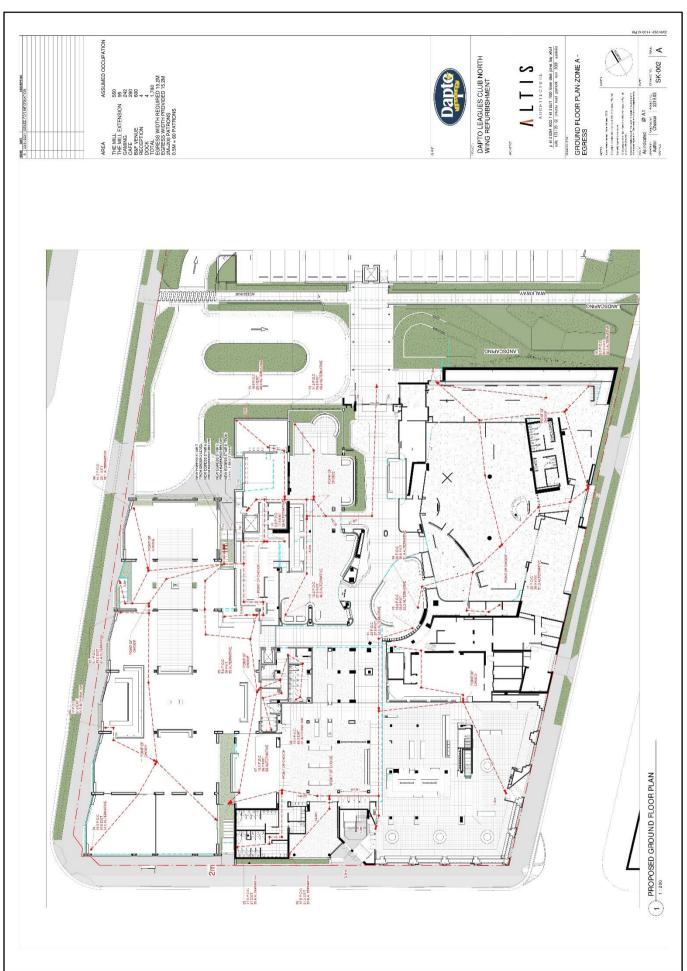




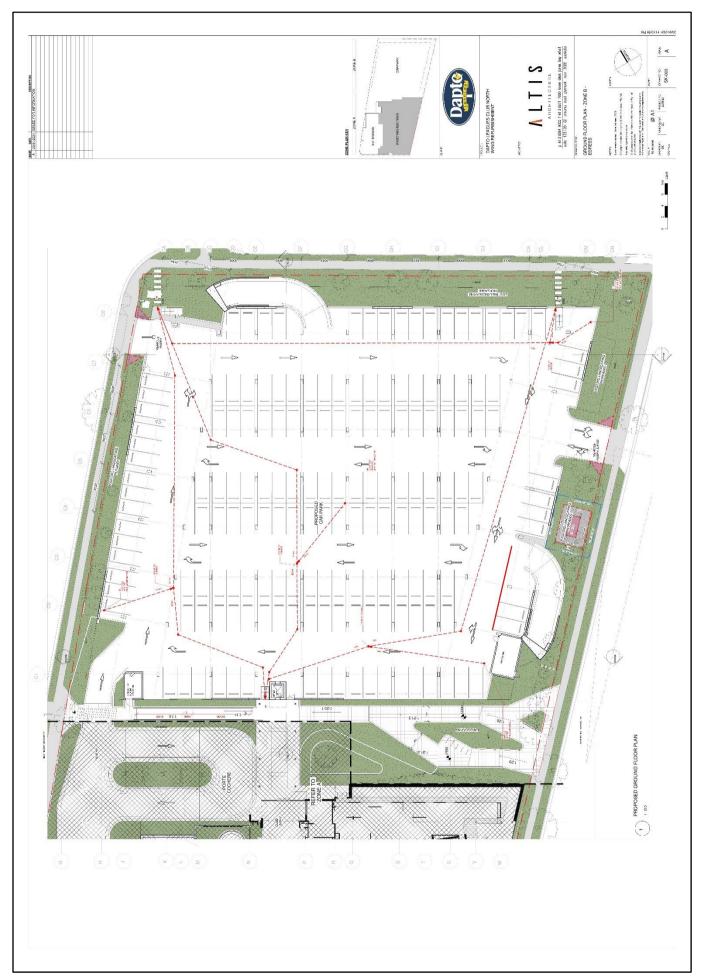




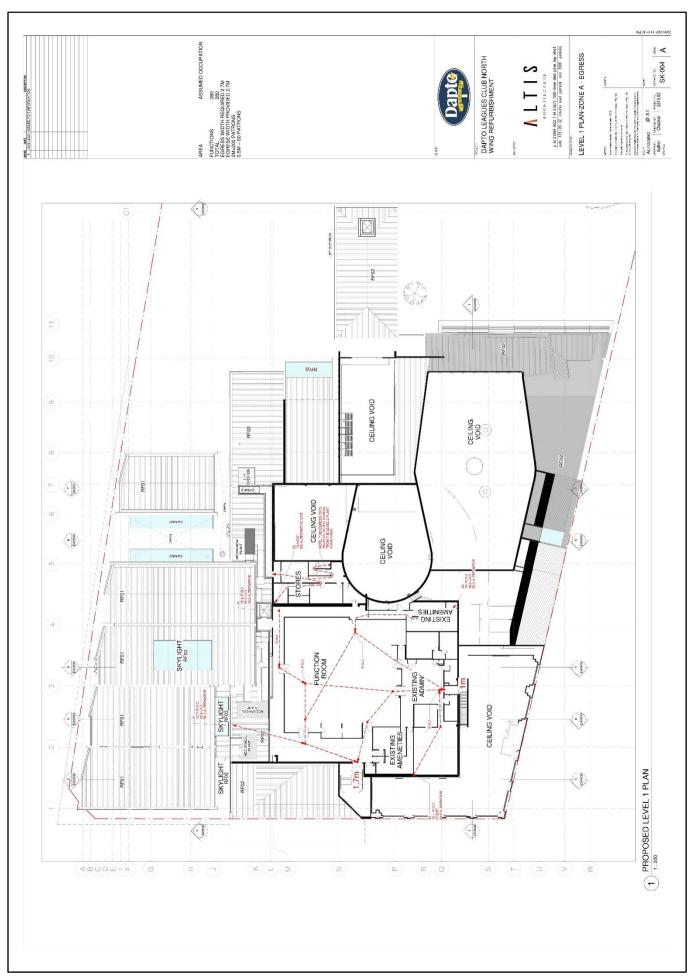




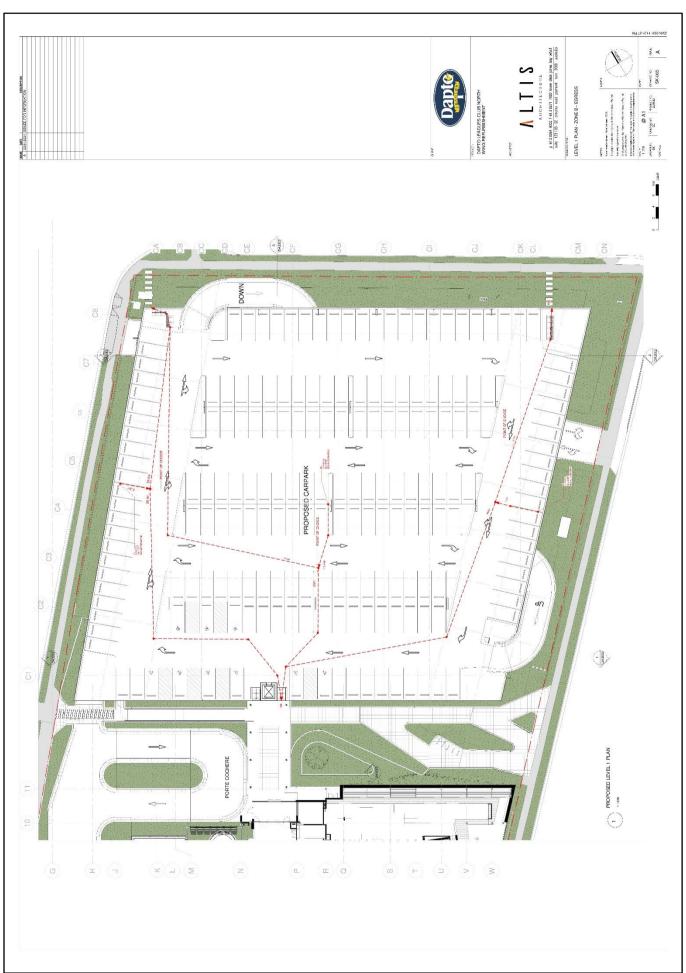




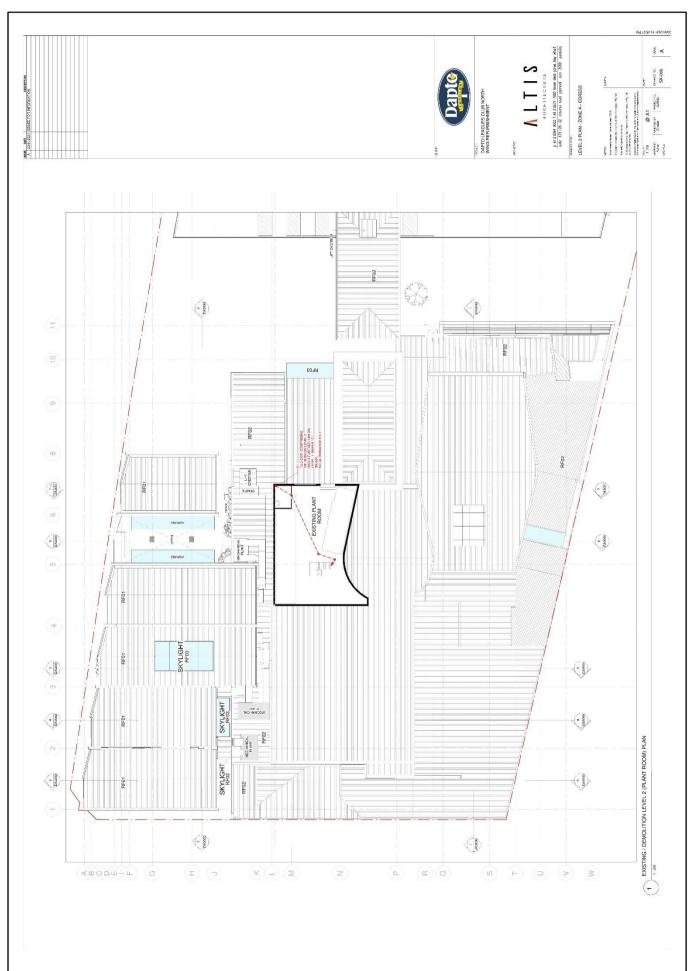














## APPENDIX B – CONSTRUCTION AND DEMOLITION WASTE MANAGEMENT REGISTER

Signature/Receipt Number				
Receival Facility				
Mode of Transport   Receival Facility				
Amount/ Volume				
Waste Stream				
Bin Type				
Date/ Time				