PROPOSED KFC NORTHAM

1 EAST STREET
NORTHAM

ENVIRONMENTAL ACOUSTIC ASSESSMENT

SEPTEMBER 2018

OUR REFERENCE: 23478-1-18177

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DOCUMENT CONTROL PAGE

ENVIRONMENTAL ACOUSTIC ASSESSMENT

KFC NORTHAM

Job No: 18177

Document Reference : 23478-1-18177

FOR

MATTHEWS & SCAVALLI ARCHITECTS

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1	1	Matthews & Scavalli Architects Attn : Damien Caraher Email : damien@mandsarchitects.com.au		✓

CONTENTS

APPENDICIES

1. INTRODUCTION

Herring Storer Acoustics were commissioned by Matthews & Scavalli Architects to undertake an acoustic assessment of noise emissions associated with the proposed KFC development at 1 East Street, Northam.

This report assesses noise emissions from the premises with regards to compliance with the requirements of the *Environmental Protection (Noise) Regulations 1997*. For this development of a KFC Store, the noise sources considered as part of this assessment include :

- Mechanical Services;
- Car movements, engine starts and doors closing;
- Ordering speakers and voices placing orders.

We note that from recent information received from DWER, that the bitumised area would be considered as a road, thus noise relating to the "propulsion and braking of motor vehicles is exempt from the *Environmental Protection (Noise) Regulations 1997*. We note that these noise sources are rarely critical in the determination of compliance. Thus, for completeness, they have been included in the assessment, for information purposes only.

For reference, plans of the proposed development are attached in Appendix A.

2. SUMMARY

The neighbouring residence of concern to this development, is the residence located adjacent to south east of the development on East Street. As the development will be open during the night period, noise associated with the development need to comply with the appropriate assigned noise levels for the night period.

Noise from the mechanical services would occur for more than 10% of the time, hence noise received at the neighbouring premises needs to comply with the assigned L_{A10} noise levels.

Noise associated with car movements, (if requiring compliance with the Regulations), would need to comply with the Assigned L_{A1} noise level. Similarly, noise emissions from the ordering speaker and voices would occur for less than 10% of the time, hence noise received at the neighbouring premises needs to comply with the assigned L_{A1} noise levels.

Noise associated with a car start and door closing, would need to comply with the Assigned L_{AMax} noise level.

Due to noise associated with the roof mounted exhaust fans, noise received at the neighbouring residence from the mechanical services could exceed the Regulatory criteria. Therefore, in order to comply with the Regulatory assigned noise levels, the roof mounted equipment requires to be screened and the discharge of the kitchen exhaust to face northwards. The screening is required to extend 600mm above and 1000mm past the sides of the exhaust fans. The screens can be constructed of sheet metal, as per the roof.

Noise from the other assessed noise sources would, with the installation of a 1.8 metre high boundary fence comply with the Regulatory requirements.

Note : A colourbond fence would be acceptable.

From the analysis undertaken, noise emissions from the proposed development has, with the inclusion of the above noise mitigations, been assessed to comply with the requirements of the *Environmental Protection (Noise) Regulations 1997*.

3. CRITERIA

The allowable noise level for noise sensitive premises in the vicinity of the proposed Facility site is prescribed by the *Environmental Protection (Noise) Regulations 1997*. Regulations 7 and 8 stipulate maximum allowable external noise levels or assigned noise levels that can be received at a premise from another premises. For residential premises, this noise level is determined by the calculation of an influencing factor, which is then added to the base levels shown below. The influencing factor is calculated for the usage of land within two circles, having radii of 100m and 450m from the premises of concern. The base noise levels for residential premises and the assigned noise levels for industrial premises are listed in Table 3.1.

TABLE 3.1 - BASELINE ASSIGNED OUTDOOR NOISE LEVEL

Premises Receiving Noise	Time of Day	Assigned Level (dB)		
		L_{A10}	L_{A1}	L_{Amax}
Noise sensitive premises: highly sensitive area	0700 - 1900 hours Monday to Saturday (Day)	45 + IF	55 + IF	65 + IF
	0900 - 1900 hours Sunday and Public Holidays (Sunday / Public Holiday Day)	40 + IF	50 + IF	65 + IF
	1900 - 2200 hours all days (Evening)	40 + IF	50 + IF	55 + IF
	2200 hours on any day to 0700 hours Monday to Saturday and 0900 hours Sunday and Public Holidays (Night)	35 + IF	45 + IF	55 + IF
Commercial Premises	All hours	60	75	80

Note: L_{A10} is the noise level exceeded for 10% of the time.
L_{A1} is the noise level exceeded for 1% of the time.
L_{Amax} is the maximum noise level.
IF is the influencing factor.

It is a requirement that received noise be free of annoying characteristics (tonality, modulation and impulsiveness), defined below as per Regulation 9.

"impulsiveness" means a variation in the emission of a noise where the difference between L_{Apeak} and $L_{Amax(Slow)}$ is more than 15 dB when determined for a single representative event;

"modulation" means a variation in the emission of noise that –

(a) is more than 3 dB L_{AFast} or is more than 3 dB L_{AFast} in any one-third octave band;

(b) is present for more at least 10% of the representative assessment period; and

(c) is regular, cyclic and audible;

"tonality" means the presence in the noise emission of tonal characteristics where the difference between –

(a) the A-weighted sound pressure level in any one-third octave band; and

(b) the arithmetic average of the A-weighted sound pressure levels in the 2 adjacent one-third octave bands,

is greater than 3 dB when the sound pressure levels are determined as $L_{Aeq,T}$ levels where the time period T is greater than 10% of the representative assessment period, or greater than 8 dB at any time when the sound pressure levels are determined as L_{ASlow} levels.

Where the noise emission is not music, if the above characteristics exist and cannot be practicably removed, then any measured level is adjusted according to Table 3.2 below.

TABLE 3.2 - ADJUSTMENTS TO MEASURED LEVELS

Where **tonality** is present	Where **modulation** is present	Where **impulsiveness** is present
+5 dB(A)	+5 dB(A)	+10 dB(A)

Note: These adjustments are cumulative to a maximum of 15 dB.

For this development, the closest residential premises of concern are located, as shown on Figure 3.1 below.

FIGURE 3.1 – AREA AROUND PROPOSED FACILITY

For the neighbouring residence of concern, as shown in Figure 01, it is noted that the oval across East Street is part of a sporting facility. Therefore, combined with other commercial land use and road traffic allowance, an Influencing Factor of +6 for this residence has been determined. Hence, the assigned outdoor noise levels for the neighbouring residential location are as listed in Table 3.3.

TABLE 3.3 - ASSIGNED OUTDOOR NOISE LEVEL
NEIGHBOURING RESIDENCES TO NORTH, EAST AND SOUTH EAST

Premises Receiving Noise	Time of Day	Assigned Level (dB)		
		$L_{A\ 10}$	$L_{A\ 1}$	$L_{A\ max}$
Noise sensitive premises : Highly sensitive area	0700 - 1900 hours Monday to Saturday	51	61	71
	0900 - 1900 hours Sunday and Public Holidays	46	56	71
	1900 - 2200 hours all days	46	56	61
	2200 hours on any day to 0700 hours Monday to Saturday and 0900 hours Sunday and Public Holidays	41	51	61

Note: L_{A10} is the noise level exceeded for 10% of the time.
L_{A1} is the noise level exceeded for 1% of the time.
L_{Amax} is the maximum noise level.

4. MODELLING

Modelling of the noise propagation from the proposed development was carried out using an environmental noise modelling computer program, "SoundPlan". Calculations were carried out using the EPA standard weather conditions as stated in the Environmental Protection Authority's *"Draft Guidance for Assessment of Environmental Factors No.8 - Environmental Noise"*.

Noise emissions from the development, include:

- Mechanical Services.
- Car movements on Site.
- Car engine start and door closing.
- Ordering Speakers.
- Voices at the drive thru ordering locations and collection windows.

The calculations were based in the sound power levels listed in Tables 4.1 and 4.2.

Table 4.1 – GENERAL SOUND POWER LEVELS

Item of Equipment	Sound Power Level, (dB(A))
Cars moving	79
Car Start	85
Car Door	87
Ordering Speaker	84
Voice	75

TABLE 4.2 – MECHANICAL SERVICES NOISE LEVELS

Item of Equipment	Noise Level dB(A)
Air Conditioning Condensing Units	1 at SWL of 74 1 at SWL of 79
Exhaust Fans	1 at 45 dB(A) @ 3m 1 at 60 dB(A) @ 3m 1 at 62 dB(A) @ 3m
Refrigeration Units	1 at 61 dB(A) @ 3m 2 at 63 dB(A) @ 3m

The above noise sources need to comply with the following assigned noise levels :

L_{A10} - Mechanical services.
L_{A1} - Car Movements, ordering speaker and voices.
L_{AMax} - Car starts and doors closing.

With regards to noise emissions, the following are noted:

1 Noise associated with the mechanical services does not take into account any diversity of operation. Such diversity would occur during the night period. Thus, this is a conservative assessment. At this stage of the project, the mechanical service has not been designed. Therefore, the noise sources have been based on designs used for the same or similar tenancies.

2 It has been assumed that the mechanical services would be located, as shown on the drawings. Preliminary modelling showed that due to noise associated with the roof mounted exhaust fans, noise received at the neighbouring residence from the mechanical services could exceed the Regulatory criteria. To comply with the Regulatory assigned noise levels, the roof mounted equipment requires to be screened. The screening is required to extend 600mm above and 1000mm past the sides of the exhaust fans. The screens can be constructed of sheet metal, as per the roof.

3 The noise modelling assumes that a solid boundary fence will be installed along the boundary to the neighbouring residence. In this case, a colourbond fence would be acceptable.

5. RESULTS

The results of the noise modelling are listed in Table 5.1.

TABLE 5.1 – CALCULATED NOISE LEVELS

Item	Calculated Noise Levels (dB(A))
Mechanical services	36
Car Movement	38
Car Start	44
Car Door	40
Ordering Speaker	46
Voice	38

6. ASSESSMENT

Given the above possible noise sources, we believe that assessments of the following scenarios are required.

The assessment for the noise sources that are required to achieve compliance are outlined below.

6.1 L_{A10} NOISE EMISSIONS

Noise emissions from the mechanical services would be steady state and would operate for the majority of time. Hence noise received from the mechanical services needs to comply with the assigned L_{A10} noise level.

As noise emissions from the mechanical services could be considered tonal. Thus, a +5 dB(A) penalty has been applied to the calculated noise level associated with the mechanical services. Table 6.1 lists the characteristics that should be included in the assessable noise level.

TABLE 6.1 – APPLICABLE ADJUSTMENTS AND ASSESSABLE L_{A10} NOISE LEVELS, dB(A) MECHANICAL SERVICES

Calculated Noise Level, dB(A)	Applicable Adjustments to Measured Noise Levels, dB(A)			Assessable Noise Level, dB(A)
	Where Noise Emission is NOT music			
	Tonality	Modulation	Impulsiveness	
36	+5	-	-	41

Table 6.2 summarises the applicable Assigned Noise Levels, and assessable noise level emissions associated for the scenarios associated with the proposed KFC development.

TABLE 6.2 – ASSESSMENT OF L_{A10} NOISE LEVEL EMISSIONS MECHANICAL SERVICES

Assessable Noise Level, dB(A)	Applicable Times of Day	Applicable Assigned L_{A10} Noise Level (dB)	Exceedance to Assigned Noise Level (dB)
41	Night Period	41	Complies

6.2 L_{A1} NOISE EMISSIONS

Noise emissions from car movement when received at the neighbouring residence could be tonal and to be conservative, a +5 dB(A) penalty for a tonal component would be applied. However, noise associated with voices is broadband and does not attract any penalties.

Table 6.3 list the characteristics that should be included and the assessable noise levels and the assessable noise level.

TABLE 6.3 – APPLICABLE ADJUSTMENTS AND ASSESSABLE L_{A10} NOISE LEVELS, dB(A)
L_{A1} NOISE EMISSIONS

Source	Calculated Noise Level, dB(A)	Applicable Adjustments to Measured Noise Levels, dB(A)			Assessable Noise Level, dB(A)
		Where Noise Emission is NOT music			
		Tonality	Modulation	Impulsiveness	
Car Movement	38	+5	-	-	43
Ordering Speaker	46	-	-	-	46
Voice	38	-	-	-	38

Tables 6.4 summarises the applicable Assigned Noise Levels, and assessable noise level emissions for each identified case that needed to be considered.

TABLE 6.4– ASSESSMENT OF L_{A1} NOISE LEVEL EMISSIONS

Source	Assessable Noise Level, dB(A)	Applicable Times of Day	Applicable Assigned L_{A1} Noise Level (dB)	Exceedance to Assigned Noise Level (dB)
Car Movement	43	Night Period	51	Complies
Ordering Speaker	46	Night Period	51	Complies
Voice	38	Night Period	51	Complies

6.3 L_{AMAX} NOISE EMISSIONS

Noise emissions from car doors closing on site need to comply with the assigned L_{AMax} noise level. As the critical period for compliance for this source is the night period, this scenario includes noise emissions from the sources associated with L_{AMax} noise levels. However, as under the Regulations, each of these sources needs to be considered individually, it is the highest calculated noise levels used for assessment, rather than the cumulative overall noise levels.

Noise associated with the closing of car and truck doors; and trucks braking could be impulsive and to be conservative, a +10 dB(A) penalty for impulsiveness would be applied. Thus, no penalties are applied to voices.

Tables 6.5 and 6.6 list the characteristics that should be included and the assessable noise levels and the assessable noise levels for cars starting and doors closing.

TABLE 6.5 - APPLICABLE ADJUSTMENTS AND ASSESSABLE L_{AMAX} NOISE LEVELS, dB(A)

Source	Calculated Noise Level, dB(A)	Applicable Adjustments to Measured Noise Levels, dB(A)			Assessable Noise Level, dB(A)
		Where Noise Emission is NOT music			
		Tonality	Modulation	Impulsiveness	
Car Start	44	+5	-		49
Car Door	40	-	-	+10	50

TABLE 6.6 – ASSESSMENT OF L_{AMAX} NOISE LEVEL EMISSIONS

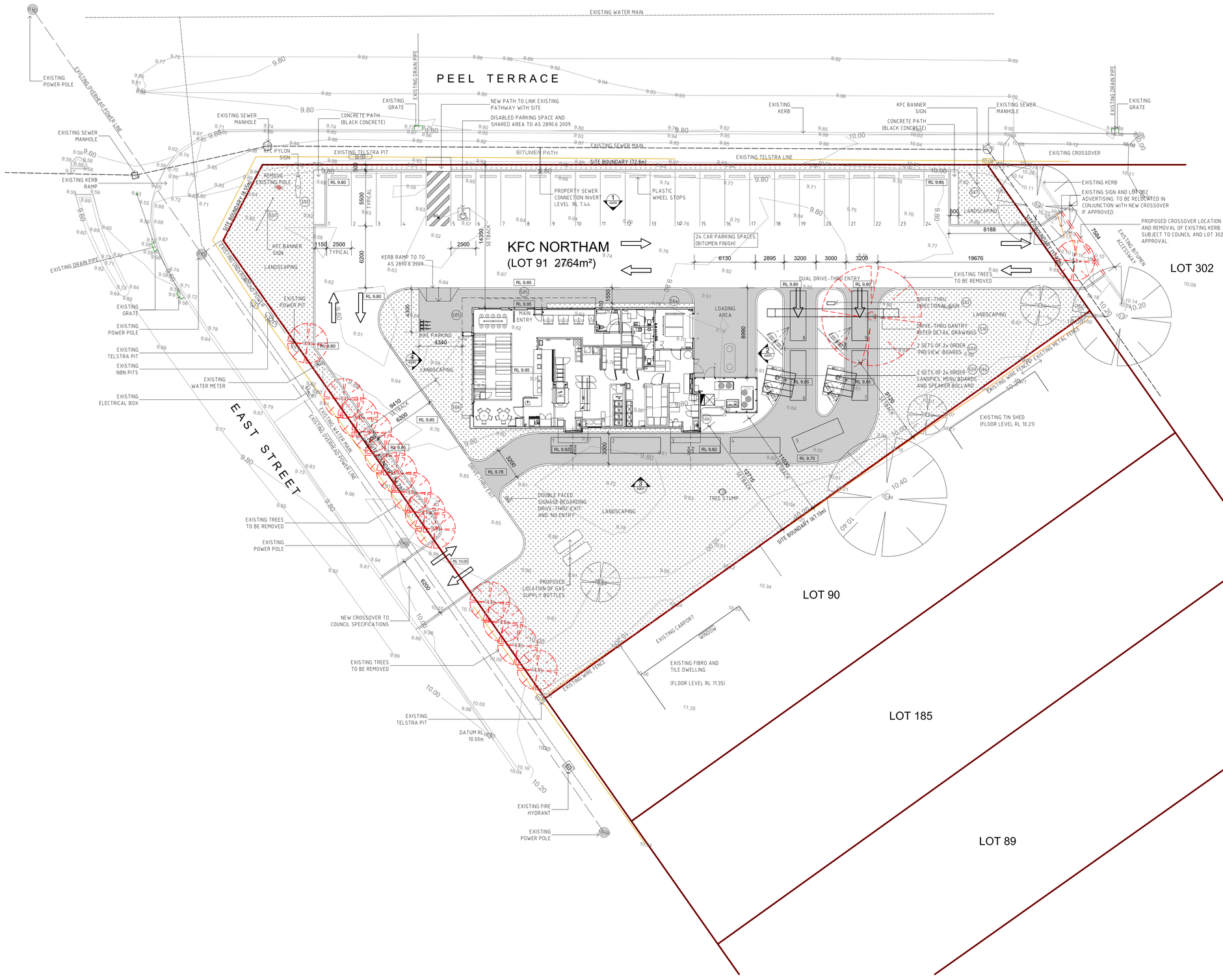
Source	Assessable Noise Level, dB(A)	Applicable Times of Day	Applicable Assigned L_{AMax} Noise Level (dB)	Exceedance to Assigned Noise Level (dB)
Car Start	49	Night Period	61	Complies
Car Door	50	Night Period	61	Complies

From the above assessments, it can be seen that noise received at the neighbouring residence, even using a conservative analysis, complies with the requirements of the *Environmental Protection (Noise) Regulations 1997* at all times. However, to achieve compliance, noise mitigation of the mechanical services would be required.

Note : The above assessment includes a 1.8 metre high boundary fence. In this case, a colourbond fence would be acceptable.

APPENDIX A

PLANS



CONTRACTOR SHOULD VERIFY ALL DIMENSIONS ON SITE BEFORE COMMENCING WORK. IF A DISCREPANCY IS FOUND BETWEEN FIGURED DIMENSIONS AND SCALED DIMENSIONS, IT SHALL BE CHECKED WITH THE PRINCIPAL CONSULTANT.

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DATE	AMENDMENT	REV
23.08.18	ISSUED TO CLIENT FOR REVIEW	A
27.08.18	ISSUED FOR DEVELOPMENT APPROVAL	DA

GENERAL KEY :

NEW WHITE PAINTED DIRECTIONAL ARROW

WHITE 'SYMBOL OF ACCESS' 900 HIGH ON BLUE RECTANGLE 1200 SQ. TO COMPLY WITH AS1428.1

100mm WIDE WHITE PAINTED CARPARK LINE AND ROADWAY LANES.

XX.XX EXISTING SITE LEVELS FROM FEATURE SURVEY

RL XX.XX PROPOSED NEW KFC SITE LEVELS

BLACK CONCRETE TO DRIVE-THRU, PATHWAY AND ALL KERBS.

LANDSCAPING AREAS

EXISTING TREE TO BE REMOVED

N

PRINCIPAL CONSULTANTS DETAILS

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ABEW Reg: 2222

CLIENT

KFC PROPRIETARY LIMITED

PROJECT

KFC NORTHAM - WHITEBOX

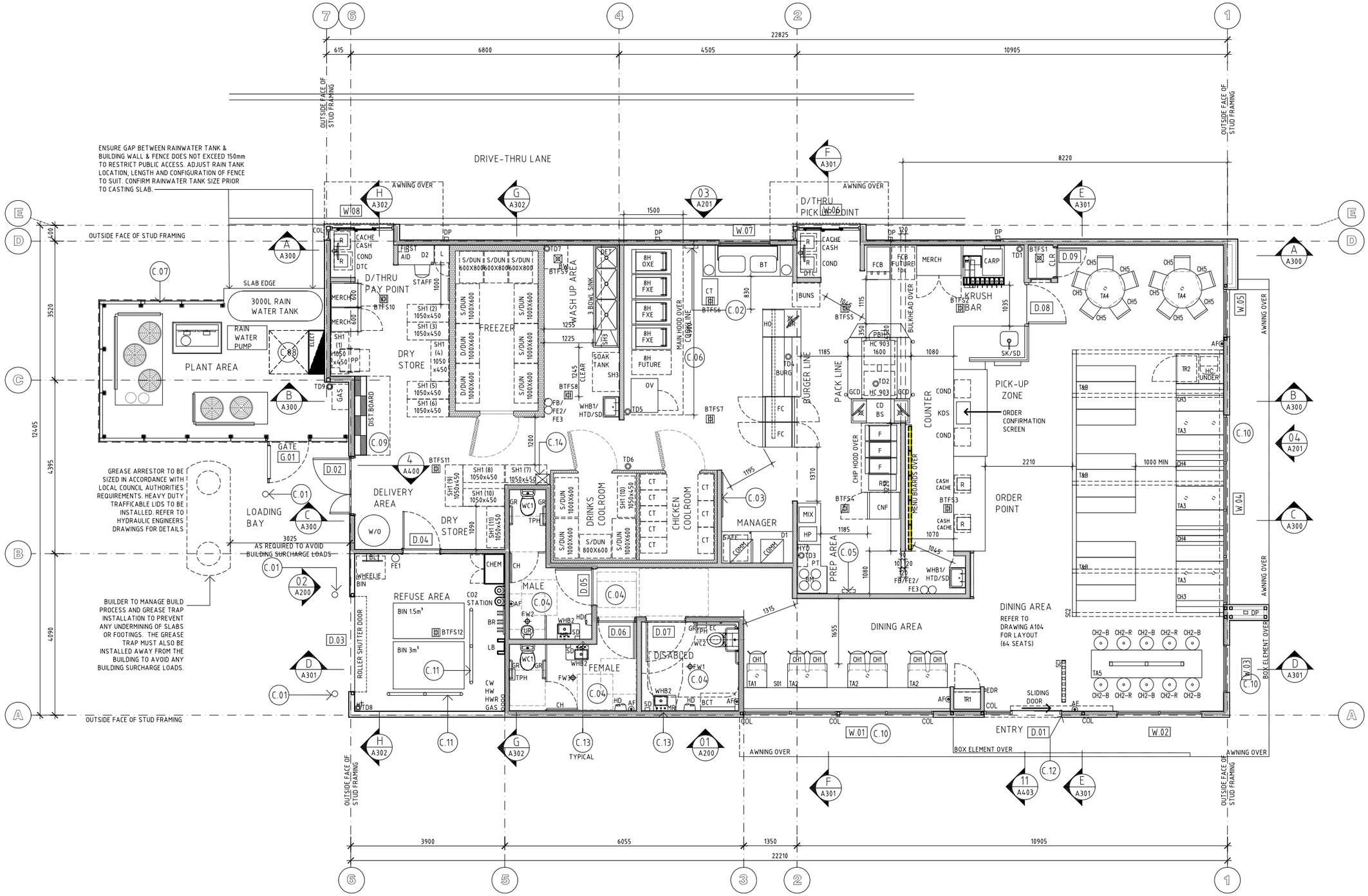
CENTRAL EAST V1.4

1 EAST STREET, WA 6401

DRAWING

SITE PLAN

DESIGN	M+S ARCHITECTS	DRAWN	M+S
CHECKED	DC	APPROVED	-
SCALE	1:200@A1 1:400@A3	DRAWING No.	A001
CLIENT JOB No.	18031	REV	DA



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	23.08.18	ISSUED TO CLIENT FOR REVIEW	A
	28.08.18	ISSUED TO YUM! FOR FAF01 APPROVAL	FAF

NOTES: CONSTRUCTION

C.01 150ø CIRCULAR HOLLOW SECTION GALVANISED BOLLARDS WITH TOP CAPS SET INTO CONCRETE FOOTING. ALIGN BOLLARD TO PROTECT DOOR JAMB

C.02 COOKLINE SWITCH PANEL

C.03 'CHAMPS' PANELS MOUNTED ON WALL

C.04 DOTTED LINES INDICATE ACCESSIBLE & AMBULANT TOILET REQUIRED CIRCULATION ZONES.

C.05 FRY LINE SWITCH PANEL

C.06 CONFIRM COOKLINE REQUIREMENTS WITH YUM CONSTRUCTION MANAGER PRIOR TO ORDERING EQUIPMENT. BUMP BAR BEHIND COOKERS IS REQUIRED BEHIND 6 HEAD COOKERS BUT NOT 8 HEAD COOKERS. INSTALL BUMP BAR AS REQUIRED.

C.07 2400H AIR GRILLES METAL SCREEN ENCLOSURE AS DETAILED. "AIR GRILLES OAL 100 SINGLE BLADE LOUVRES" WITH POSTS AS REQUIRED.

C.08 1000mm CLEARANCE ZONE REQUIRED IN FRONT OF ELECTRICAL METERS AT ALL TIMES

C.09 600mm WIDE CLEARANCE ZONE REQUIRED IN FRONT OF DISTRIBUTION BOARD AT ALL TIMES

C.10 LANDSCAPING TO BE PLANTED AND TRIMMED TO PROVIDE 400mm CLEAR GAP TO WALL FOR CLEANING / MAINTENANCE PURPOSES.

C.11 REFUSE AREA BUMP RAIL

C.12 DOOR BUZZER & AUTO DOOR KEY ENTRY TO BE MOUNTED ON SIDE FACE OF WALL. DO NOT LOCATE ON FRONT FACE OF WALL

C.13 PROVIDE ADDITIONAL BLOCKING / FRAMING WITHIN WALLS AS NECESSARY TO SUPPORT BASINS

C.14 GAS HOTWATER HEATER LOCATION OVER

PRINCIPAL CONSULTANTS DETAILS

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ABEW Reg: 2222

CLIENT

KFC PROPRIETARY LIMITED

PROJECT

KFC NORTHAM - WHITEBOX

CENTRAL EAST V1.4

1 EAST STREET, WA 6401

DRAWING

FLOOR PLAN

KEY:

WALLS:

METAL STUD FRAME WALLS PLUS ROOF FRAMING IS TO BE SUPPLIED AND INSTALLED BY A SPECIALIST SUBCONTRACTOR. .

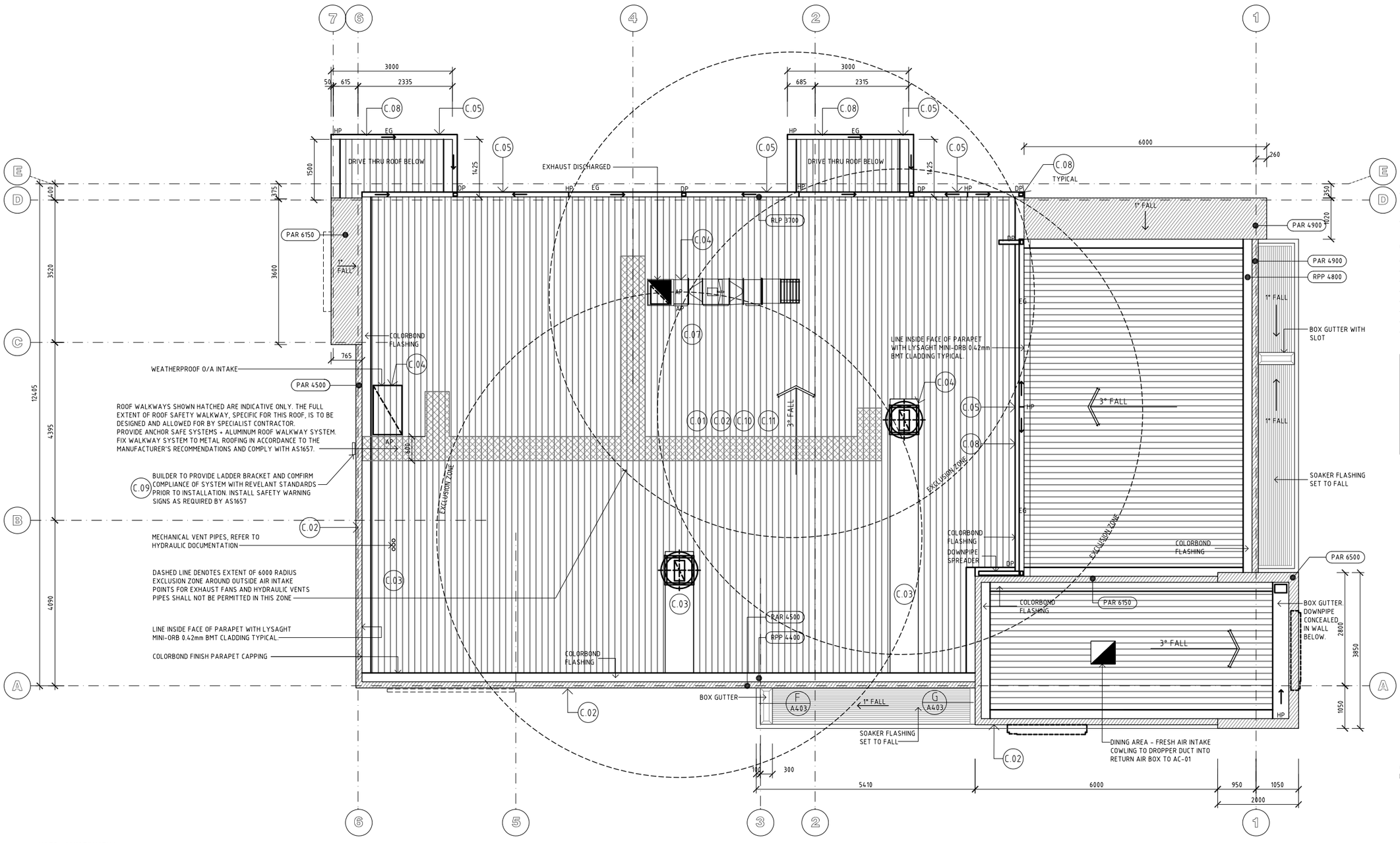
LINING:

- INTERNAL WALLS LINED WITH 9mm VILLABOARD ON ALL EXPOSED FACES. TAPE AND SET JOINTS.
- INTERNAL WALLS LINED AS ABOVE BUT INSULATED TO SECTION J REQUIREMENTS.
- COOLROOM AND FREEZER PANELING REFER TO REFRIGERATION DOCUMENTATION.
- EXTERNAL WALLS LINED WITH 9mm VILLABOARD INTERNALLY (TAPE AND SET JOINTS) AND EXTERNALLY :-
  - HARDI EXOTEC FACADE PANELS WITH PAINT FINISH.
  - LYSAGHT LONGLINE 305 VERTICAL WALL CLADDING.
  WALLS TO BE INSULATED TO MEET SECTION J REQUIREMENTS.
- EXTERNAL WALLS LINED AS ABOVE WITHOUT INSULATION.

OTHER:

- COL STEEL COLUMN
- DP DOWNPIPE: REFER HYDRAULIC DRAWINGS FOR SIZES
- EDR EMERGENCY AUTO DOOR RELEASE WITH S/S SHROUD
- BTFS1 BUCKET TRAP FLOOR SUMP TO HYDRAULIC ENGINEERS DETAILS
- FW FLOOR WASTE TO HYDRAULIC ENGINEERS DETAILS
- AFG INDICATIVE LOCATIONS FOR RENTOKILL AIR FRESHENERS - DETAILS & HEIGHTS TO BE CONFIRMED

BASE	RAMAKERS ARCH	DRAWN	WP
CHECKED		APPROVED	
SCALE	1:50@A1 1:100@A3	DRAWING No.	REV
CLIENT JOB No.	18031	A100	FAF



NOTE : CONSTRUCTION

C.01 ROOF SHEETING TO BE BHP LYSAGHTS KLIP LOCK 406 0.48 BMT. ROOF INSULATION TO BE ANTICON 100HP ON 80mm ASHGRID SPACER SYSTEM (WITH SAFETY MESH) INSTALLED ON CUSTOM TOP HATS.

NOTE: INSULATION MUST MAINTAIN THICKNESS OF 100mm.
NOTE: ROOF TO 'UPPER BOX' ELEMENT TO BE INSULATED.
NOTE: INSULATION MUST BE KEPT DRY AT ALL TIMES. IF THERE IS A LIKELIHOOD OF RAIN BEFORE THE ROOF CLADDING CAN BE INSTALLED, THE BUILDER SHALL MAKE ALLOWANCE TO COVER INSULATION WITH TARPAULINS, OR ALTERNATIVELY TO INSTALL AN ADDITIONAL LAYER OF SARKING ABOVE THE BLANKET.

C.02 ALL FLASHINGS, CAPPINGS & GUTTERS TO BE COLORBOND FINISH TO MATCH ROOFING. REFER TO THE ELEVATIONS FOR CAPPING FACE COLOUR

C.03 CONTINUOUS 1.2mm BMT METAL COVER FLASHING FROM RIDGE TO ROOF PENETRATION COLORBOND FINISH TO MATCH ROOFING.

C.04 REFER TO MECHANICAL & HYDRAULICS DRAWINGS FOR ROOF PENETRATIONS & EQUIPMENT LOCATIONS

C.05 REFER TO HYDRAULIC ENGINEERS DOCUMENTATION FOR GUTTER TYPE / SPECIFICATION.

C.06 ALL EXPOSED DUCTWORK TO BE PAINTED WHITE U.N.O.

C.07 CONFIRM POSTION OF MAKE UP AIR & AVAILABLE SPACE WITH MECHANICAL CONSULTANT PRIOR TO MANUFACTURE OF EQUIPMENT.

C.08 SUPPLY AND INSTALL REMOVABLE LEAF GUARD OVER DOWNPIPES: TYPICAL.

C.09 ANCHOR SAFE SYSTEMS Pty Ltd LADDER BRACKET AVAILABLE FROM ANCHOR SAFE SYSTEMS Ph:(02) 6021 7630 CONFIRM COMPLIANCE OF ROOF SAFETY SYSTEM WITH RELEVANT STANDARDS PRIOR TO INSTALLATION.

C.10 THE BUILDER SHALL ENGAGE ANCHOR SAFE SYSTEMS Pty Ltd Ph:(02) 6021 7630 OR SIMILAR APPROVED ROOF ACCESS SYSTEM PROVIDER TO DESIGN, CONSTRUCT AND CERTIFY THE ROOF SAFETY ACCESS SYSTEM. SUPPLIER TO PROVIDE, INSTALL AND CERTIFY THE LADDER BRACKETS, DROPLINE CABLES, STAINLESS STEEL ANCHOR POINTS, WALKWAYS, WARNING SIGNS ETC AS NECESSARY TO COMPLETE THE SYSTEM. PROVIDE SAFETY SIGNS AND CERTIFY THE SYSTEM AS REQUIRED BY AS 1657 AND OTHER RELEVANT STANDARDS.
(NOTE: THE FULL EXTENT OF ROOF SAFETY WALKWAY, SPECIFIC FOR THIS ROOF, IS TO BE DESIGNED AND ALLOWED FOR BY SPECIALIST CONTRACTOR.)

C.11 ROOF SHEETING INSTALLED ON 80mm ASHGRID SPACERS WITH SAFETY MESH ON CUSTOM TOP HATS AS SPECIFIED

CONTRACTOR SHOULD VERIFY ALL DIMENSIONS ON SITE BEFORE COMMENCING WORK. IF A DISCREPANCY IS FOUND BETWEEN FIGURED DIMENSIONS AND SCALED DIMENSIONS, IT SHALL BE CHECKED WITH THE PRINCIPAL CONSULTANT.

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NOTE :

MECHANICAL EQUIPMENT AND PENETRATION LOCATIONS ARE DIAGRAMATIC ONLY. REFER MECHANICAL DRAWINGS FOR LOCATIONS AND CLEARANCE REQUIREMENTS

ALL HEIGHTS ARE IN MILLIMETRES AND RELATE TO DATUM LEVEL 0.00 - SLAB LEVEL OF DINING ROOM

REFER TO HYDRAULIC DOCUMENTATION FOR DOWNPIPE SIZES AND VENT LOCATIONS.

KEY :

EG	EAVES GUTTER
HP	GUTTER HIGH POINT
DP	DOWNPIPE TO HYD. ENG. DETAIL
PAR 3300	TOP OF PARAPET LEVEL ABOVE 0.00
RPP 3300	ROOF PITCHING POINT ABOVE 0.00 (TOP OF PURLIN / UNDERSIDE OF ROOFING)
RLP 4110	ROOF LOW POINT ABOVE 0.00 (TOP OF PURLIN / UNDERSIDE OF ROOFING)
FALL	DIRECTION OF ROOF FALL

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KFC NORTHAM - WHITEBOX

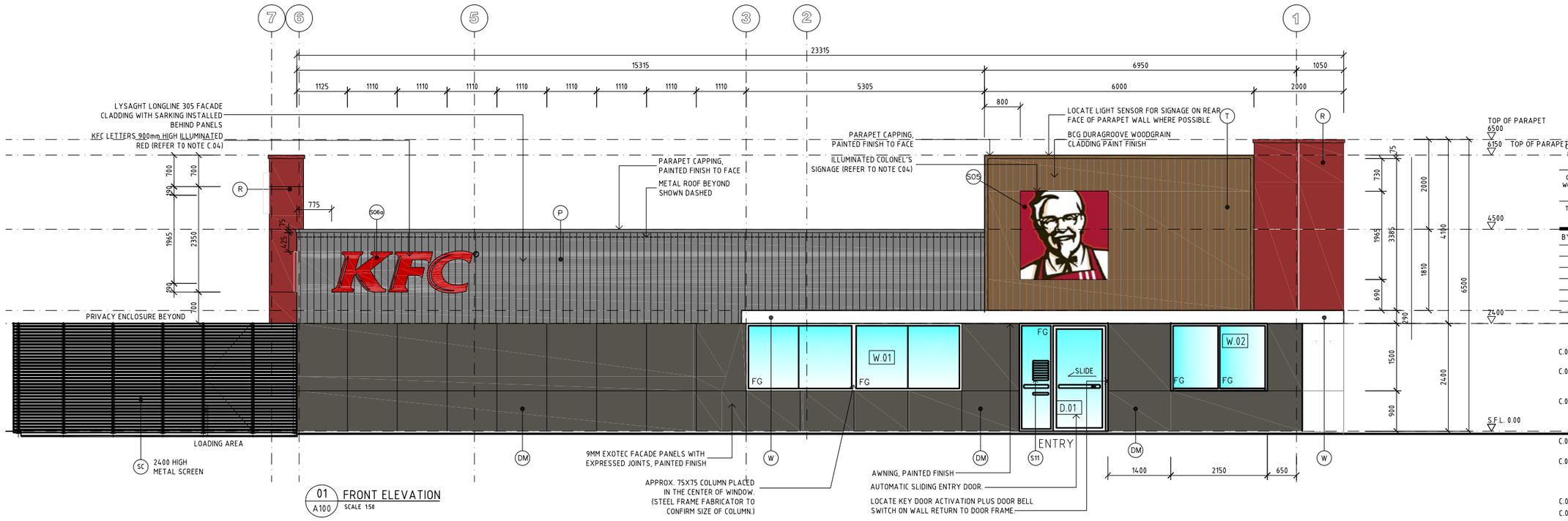
CENTRAL EAST V1.4

1 EAST STREET, WA 6401

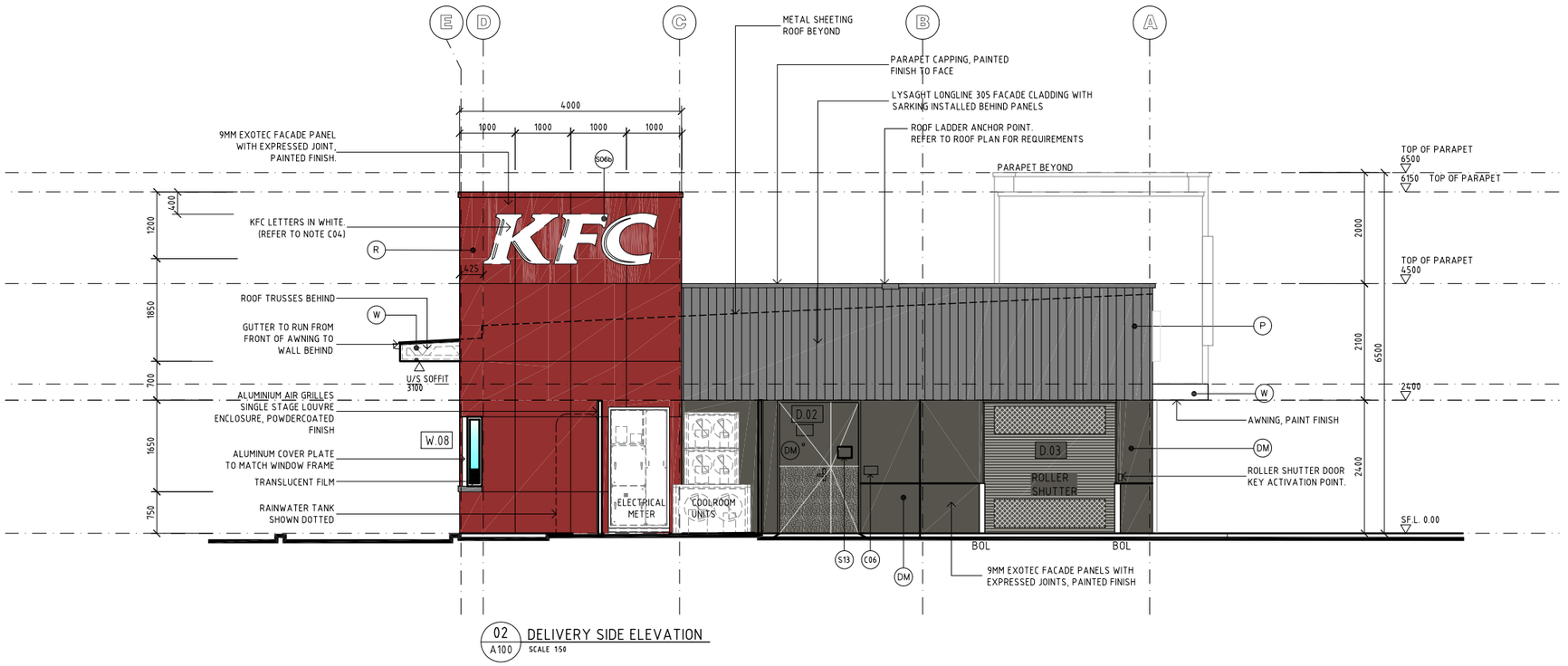
DRAWING

ROOF PLAN

BASE	M+S ARCHITECTS	DRAWN	WP
CHECKED		APPROVED	
SCALE	1:50@A1 1:100@A3	DRAWING No.	REV
CLIENT JOB No.	18031	A101	FAF



01 / A100 FRONT ELEVATION
SCALE 1:50



02 / A100 DELIVERY SIDE ELEVATION
SCALE 1:50

CONTRACTOR SHOULD VERIFY ALL DIMENSIONS ON SITE BEFORE COMMENCING WORK. IF A DISCREPANCY IS FOUND BETWEEN FIGURED DIMENSIONS AND SCALED DIMENSIONS, IT SHALL BE CHECKED WITH THE PRINCIPAL CONSULTANT.

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BY	DATE	AMENDMENT	REV
	23.08.18	ISSUED TO CLIENT FOR REVIEW	A
	28.08.18	ISSUED TO YUM! FOR FAF01 APPROVAL	FAF

NOTES : CONSTRUCTION

C.01 PAVEMENT HEIGHT ADJOINING DRIVE THRU WINDOWS TO MATCH INTERNAL FLOOR LEVEL

C.02 EXTERNAL WALL SHEETING WHICH COMES INTO CONTACT WITH ANY LANDSCAPING SOIL TO BE TREATED WITH AN APPLIED WATERPROOF FINISH.

C.03 WHERE EXPRESSED JOINTS ARE INDICATED ON THE ELEVATIONS. SPECIAL CARE AND ATTENTION SHALL BE PAID TO ALIGNING THE JOINTS WITH ADJOINING BUILDING ELEMENTS OR EQUALLY DIVIDING JOINTS.

C.04 PROVIDE POWER & SUPPORT FRAMING BEHIND ALL SIGNS. PROVIDE POWER BEHIND EACH INDIVIDUAL KFC LETTER

C.05 BCG DURAGROOVE WOODGRAIN CLADDING. FINISHED WITH - 1st&2nd COAT AUDD0053 DULUX WEATHERSHIELD LOW SHEEN. - 3rd&4th COAT AUDW0663 CABOTS EXTERIOR VARNISH STAIN GLOSS.

C.06 300 x 200mm METAL SIGN FIXED TO WALL STATING:

C.07 LIGHT SENSORS (WHERE REQUIRED) ARE TO BE LOCATED ON THE REAR FACE OF PARAPET WALLS WHERE POSSIBLE.

WARNING:
SAFE ROOF ACCESS POINT. ENSURE LADDER IS ATTACHED CORRECTLY AT TOP BRACKET

KEY : GENERAL

0.00 ▼ HEIGHT IN MILLIMETRES IN RELATION TO DATUM LEVEL 0.00 - SLAB LEVEL OF DINING ROOM

D.P. DOWNPIPE

S11 SIGNAGE. REFER A008 FOR DETAILS

COLOUR KEY :

DM DULUX 'DOUBLE MONDO' (DARK GREY) (A1017)

R DULUX 'RED BOX' (RED) (A0639)

W DULUX 'ALABASTER' (WHITE) KFC (A1016)

P DULUX 'PORTLAND' (LIGHT GREY) (A1018)

T DULUX 'GUITAR' (P10-B8) TIMBER LOOK CLADDING REFER TO NOTE C.05

SC DULUX POWDERCOAT 'ONYX PEARL' (52052)

PRINCIPAL CONSULTANTS DETAILS
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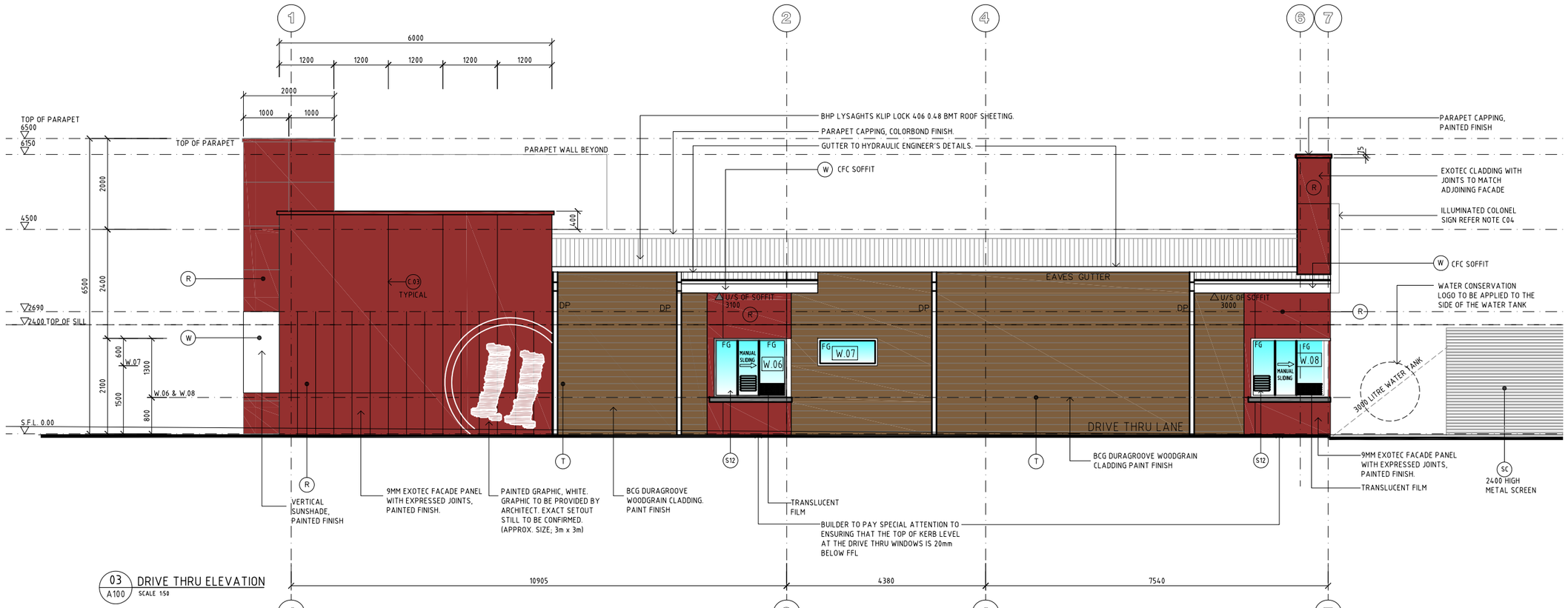
p: (08) 9316 0531
f: (08) 9316 0531
w: mandsarchitects.com.au
ABEW Reg: 2222

CLIENT
KFC PROPRIETARY LIMITED

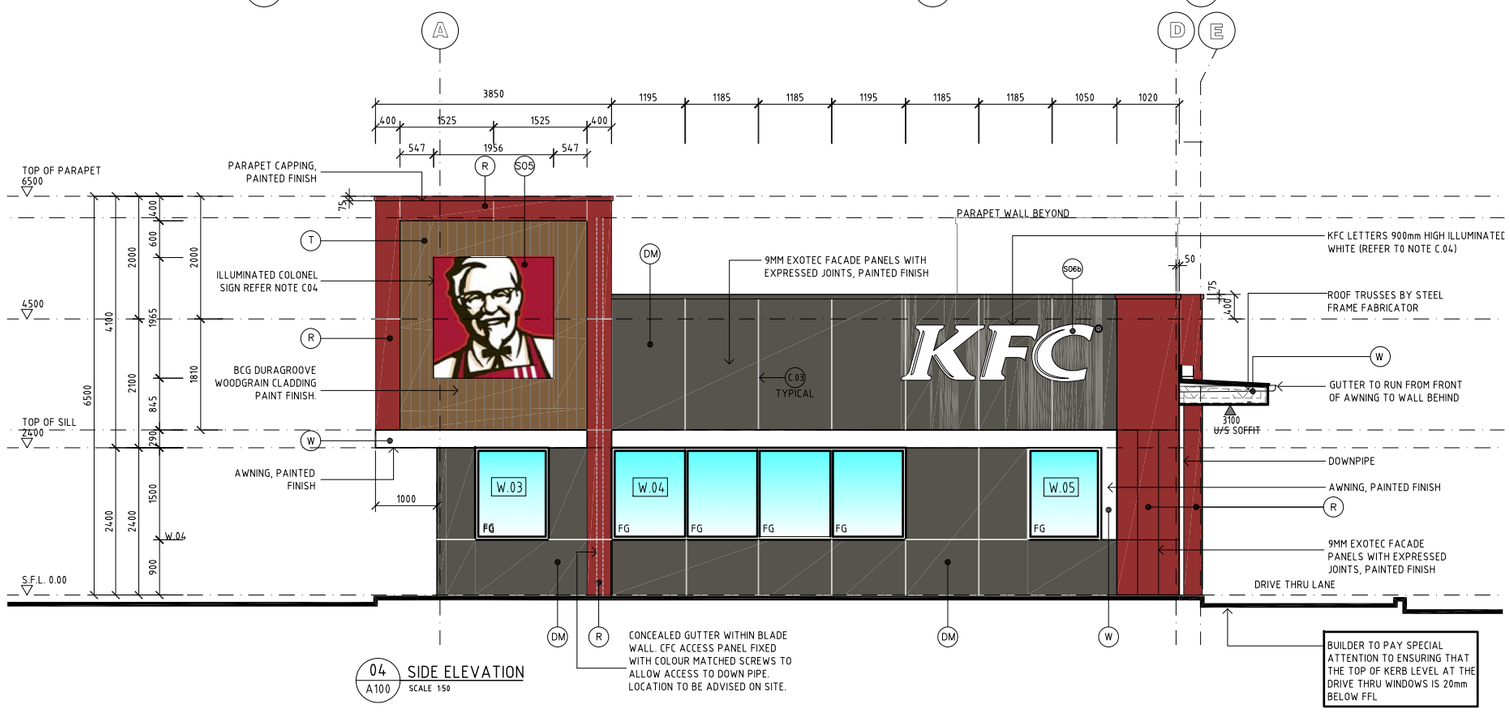
PROJECT
KFC NORTHAM - WHITEBOX
CENTRAL EAST V1.4
1 EAST STREET, WA 6401

DRAWING
ELEVATIONS 01 + 02
SHEET 1

BASE M+S ARCHITECTS		DRAWN WP	
CHECKED		APPROVED	
SCALE 1:50@A1 1:100@A3		DRAWING No. A200	REV FAF
CLIENT JOB No. 18031			



03 A100 DRIVE THRU ELEVATION
SCALE 1:50



04 A100 SIDE ELEVATION
SCALE 1:50

NOTE:

THE BUILDER SHALL UTILIZE WALL CLADDING ETC AS NOMINATED ON THE ELEVATIONS. MATERIAL NOTES ON THE DETAILS UTILIZE GENERIC TERMS FOR EASE OF MODIFICATION. CAPPINGS ON WALLS TO BE FINISHED / COLOUR TO MATCH WALL BELOW.

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NOTES : CONSTRUCTION

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KEY : GENERAL

0.00 ▼ HEIGHT IN MILLIMETRES IN RELATION TO DATUM LEVEL 0.00 - SLAB LEVEL OF DINING ROOM

D.P. DOWNPIPE

S11 SIGNAGE. REFER A008 FOR DETAILS

COLOUR KEY :

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CLIENT

KFC PROPRIETARY LIMITED

PROJECT

KFC NORTHAM - WHITEBOX
CENTRAL EAST V1.4
1 EAST STREET, WA 6401

DRAWING

ELEVATION 03 + 04
SHEET 2

BASE	M+S ARCHITECTS	DRAWN WP	
CHECKED		APPROVED	
SCALE	1:50@A1 1:100@A3	DRAWING No. A201	REV FAF
CLIENT JOB No.	18031		