MEMORANDUM

To:	Citify & BFC Pty Ltd		
Attention:	Mr J WILKINSON	Reference:	LCE14462-011a
From:	Matt Cuppleditch	Date:	27 February 2019
Project:	Mixed-Use Development – 248 Unley Road, Hyde Park SA 5061		
Subject:	NCC Glazing and Insulation Calculations		

This memo has been completed to provide analysis of the minimum glazing and insulation requirements for the commercial tenancies and common areas to meet the 'Deemed to Satisfy' conditions of the 2016 National Construction Code (NCC) for the development at 248 Unley Road, Hyde Park SA 5061.

This assessment consolidates the compliance record in accordance with Section J for Building Rules Consent. The following parts of Section J are assessed within this report:-

Part J1 Building fabric

Part J2 External glazing

Part J3 Building sealing

Calculations were completed based on the latest architectural plans provided by Gemma Lea Design Studio, dated 20 February 2019.

The proposed building is a residential mixed-use development. This memo pertains to the retail / restaurant tenancies on the ground floor and first floor as well as the common Pool area and gym space on the second floor. It has been assumed that the residential lobby and all other retail back of house corridors are non-conditioned spaces.

No in-slab heating or cooling system is proposed as such, relevant clauses of Part J1.6 do not apply.

The site is located approximately 3km South of Adelaide CBD, and in accordance with 2016 NCC Part A1 considered Climate Zone 5.

J1 -BUILDING FABRIC

We have reviewed Architectural documentation and provide required insulation performance and layout in accordance with NCC 2016. Refer attached Appendix A.

For wall constructions where lightweight external cladding is fixed directly to a metal frame and the internal wall lining is also fixed directly to the same metal frames (no furring channel or other additional framing member), a thermal break of minimum R0.2 is to be installed between the external cladding and the metal frame.

The minimum requirements of 2016 NCC Part J1 were assessed for the proposed building fabric. Appendix A identifies the proposed additional insulation to achieve that stipulated within Table 1.

Table 1: 2016 NCC Part J1 Minimum requirements

Building Fabric	**2016 NCC Minimum Total System R-Value** (construction + added insulation)	
Floor *(Concrete slab below Tenancy – Carpark below)*	R-Value = 2.0	
Ceiling / Roof (Balcony above First Floor Tenancies / Roof above Pool)	R-Value = 3.2 – where solar absorptance* is not more than 0.4 (Typical Roof Colour - Off White / Light Cream) R-Value = 3.7 – where solar absorptance* is more than 0.4 but not more than 0.6 (Typical Roof Colour - Light Grey, Galvanised Steel) R-Value = 4.2 – where solar absorptance* is more than 0.6 (Typical Roof Colour - Dark Grey, Red, Green)	
External Wall *(Concrete Wall WT1)*	R-Value = 2.8	
Partition Wall – Adjacent Store Rooms and Stairs *(Concrete Wall WT1, WT2)*	R-Value = 1.0	
Partition Wall – Adjacent Wet Areas and Lifts *(WT7)*	R-Value = 1.8	
Roof Lights	**2016 NCC Minimum Total System U-Value ($W/m^2.°C$) and SHGC**	
Pool Deck	U: 4.3	SHGC: 0.43
Gym & Yoga Room	U: 3.4	SHGC: 0.34

**Refer to the solar absorptance of the roof finish (ie. metal sheeting) and terrace tiles.*

Note:- If additional bathroom or store room facilities are to be added to the tenancy spaces, the walls neighbouring a conditioned space must be provided insulation in accordance with Table 1.

If tenancy areas are further divided with unconditioned spaces (toilets and store rooms) the walls must be provided

The following clauses are to be included within the Architectural Documentation to comply with Part J1 requirements:-

1. "A thermal break is to be installed:
- between lightweight external cladding and a metal frame.
- with minimum thermal performance of R0.2.
- as a proprietary item."

2. "Insulation must comply with AS/NZS 4859.1."

3. "Insulation must be installed so that it:
- abuts or overlaps adjoining insulation other than at supporting members such as studs, noggings, joists, furring channels and the like where the insulation must be against the member; and

- forms a continuous barrier with ceilings, walls, bulkheads, floors or the like that inherently contribute to the thermal barrier; and

- does not affect the safe or effective operation of a service or fitting.
Bulk insulation must be installed so that:

- it maintains its position and thickness, other than where it is compressed between cladding and supporting members, water pipes, electrical cabling or the like; and

- in a ceiling, where there is no bulk insulation or reflective insulation in the external wall beneath, it overlaps the external wall by not less than 50 mm.

Reflective insulation must be installed with:
- the necessary airspace between a reflective side of the reflective insulation and a building lining or cladding as specified with the architectural documentation; and
- the reflective insulation closely fitted against any penetration, door or window opening; and
- the reflective insulation adequately supported by framing members; and
- each adjoining sheet of roll membrane being—
(A) overlapped not less than 50 mm; or
(B) taped together."

J2 – EXTERNAL GLAZING

The required glazing was determined by using the NCC Volume One Glazing Calculator (NCC 2014), which assesses the required U-value and Solar Heat Gain Coefficient (SHGC) to determine whether the design meets 'Deemed to Satisfy' code requirements. Refer to Appendix B.

The minimum performance glazing for each façade of the Ground and First Floor is summarised in Table 2.

Table 2: 2016 NCC Part J2 minimum external glazing performance requirements

Ground Floor – North Facade	
Minimum Total System U Value ($W/m^2.^oC$)*	**5.3**
Minimum Total System Solar Heat Gain Coefficient (SHGC)*	**0.28**
Ground Floor – East Facade	
Minimum Total System U Value ($W/m^2.^oC$)*	**5.3**
Minimum Total System Solar Heat Gain Coefficient (SHGC)*	**0.28**

Ground Floor – South Facade	
Minimum Total System U Value ($W/m^2.^oC$)*	**5.3**
Minimum Total System Solar Heat Gain Coefficient (SHGC)*	**0.28**
First Floor – West Facade	
Minimum Total System U Value ($W/m^2.^oC$)*	**5.3**
Minimum Total System Solar Heat Gain Coefficient (SHGC)*	**0.41**
First Floor – South Facade	
Minimum Total System U Value ($W/m^2.^oC$)*	**5.3**
Minimum Total System Solar Heat Gain Coefficient (SHGC)*	**0.41**
Second Floor – Pool Deck – West Facade	
Minimum Total System U Value ($W/m^2.^oC$)*	**3.4**
Minimum Total System Solar Heat Gain Coefficient (SHGC)*	**0.21**

**system performance values including glass and frame*

J3 – BUILDING SEALING

The following clauses are to be included within Architectural documentation to comply with Part J3 requirements:-

"A caulking compound (or similar approved) sealant is to be used to around window frames, doors, plumbing and electrical conduits to minimise air leakage from penetrations within the envelope constructions."

"A seal to restrict air infiltration must be fitted to each edge of an external door, openable window and other such opening when serving a habitable room and/or part of the envelope of a conditioned space."

"A seal required for the bottom edge of an external swing door, must be a draft protection device and for the other edges of an external swing door or the edges of an openable window or other such opening, may be a foam or rubber compressible strip, fibrous seal or the like."

"An entrance to a building, if leading to a conditioned space must have an airlock, self-closing door, revolving door or the like."

Should you have any queries regarding the above, please don't hesitate to contact the undersigned.

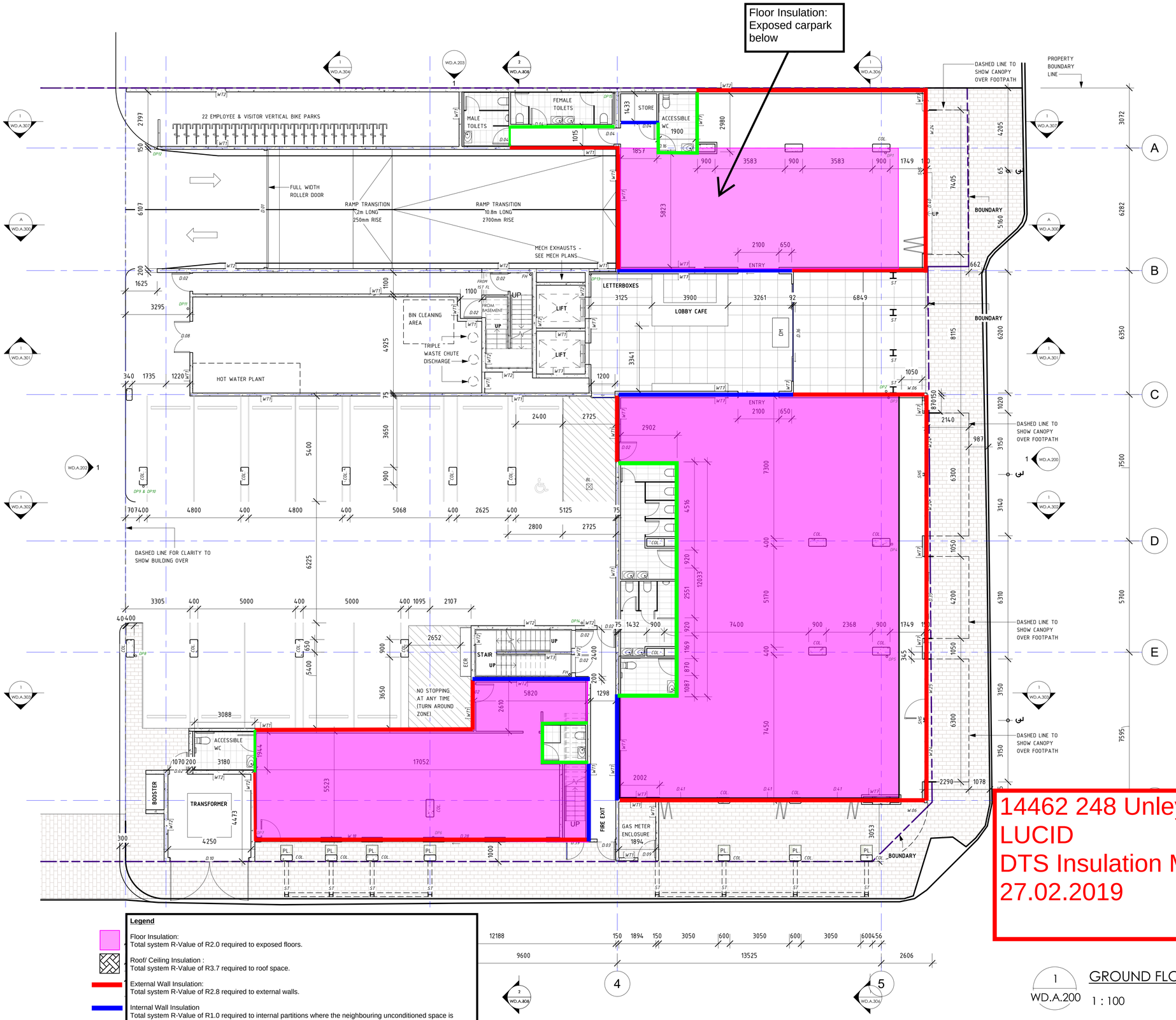
Regards
LUCID CONSULTING ENGINEERS

MATT CUPPLEDITCH
Sustainability Engineer

Attachments: Appendix A - LCE14462_Insulation Markup_27.02.19
Appendix B - NCC GLAZING CALCULATOR 2014

APPENDIX A –THERMAL ENVELOPE INSULATION MARKUP

KEY	
KEY	DESCRIPTION
AC	AIR CONDITIONING CONDENSER. WHERE ON BALCONY CONCEAL IN FULL HEIGHT VENTILATION CUPBOARD WITH LOUVRE DOORS.
BIR	BUILT IN ROBE
BL	BOLLARD
BR	BROOM/TALL CUPBOARD
COL	STRUCTURAL CONCRETE COLUMN TO ENG'S DTLS
CT	COOKTOP (GAS)
DM	DOORMAT
DR	MACHINE DRYER SPACE
DW	DISHWASHER
ECR	ELECTRICAL & COMMUNICATIONS RISER CUPBOARD
FC	FEATURE ARCHITECTURAL COLUMN
FH	FIRE HYDRANT RISER
FT	FLOOR TRAP
GA	IN-GROUND GREASE ARRESTOR
L	LINEN CUPBOARD
LD	LINEAR DRAIN
MSB	MAIN SWITCH BOARD
NBN	NBN/DATA CABINET
OBS	OVER BONNET STORAGE UNIT - 1000mm CLEAR - 1100h x 2400w x 810d (TOTAL HEIGHT 2320)
P	PANTRY CUPBOARD
PL	PLANTER BOX (REQUIRES DRAINAGE AND TANKING
R	REFRIGERATOR SPACE
RH	RANGEHOOD WITH DUCTING TO OUTSIDE
SHS	SHS COLUMN TO ENG'S DTLS
ST	FEATURE STEEL COLUMNS TO ENG'S DTLS
UBO	UNDER BENCH OVEN
WIR	WALK IN ROBE
WM	WASHING MACHINE SPACE WITH FLOOR TRAP UNDER AND TAPS
WO	WALL OVEN



Legend

Floor Insulation:
Total system R-Value of R2.0 required to exposed floors.

Roof/ Ceiling Insulation :
Total system R-Value of R3.7 required to roof space.

External Wall Insulation:
Total system R-Value of R2.8 required to external walls.

Internal Wall Insulation
Total system R-Value of R1.0 required to internal partitions where the neighbouring unconditioned space is unventilated.

Internal Wall Insulation:
Total system R-Value of R1.8 required to internal partitions where the neighbouring unconditioned space is highly ventilated.

WALL SCHEDULE

TAG	CONSTRUCTION	FRL	INSULATION	ACOUSTIC
WT1	150mm PRECAST CONCRETE PANEL - STANDARD GREY INTERNALLY, REFER ELEVATIONS FOR EXTERNAL CONCRETE COLOURS	90/90/90	WHEN LINED WITH WT5 OR WT6, 90mm R2.5 BRADFORD GW NON-COMBUSTIBLE INSULATION TO INSIDE OF EXTERNAL WALLS, BOTH SIDES OF PARTY WALLS, & SOU SIDE OF SOU TO LOBBY AREAS	Rw 50 AND MIN Rw + Ctr 50 IF DISCONT. CONSTRUCTION - MIN AIR GAP 20mm - OR IF NO LINING
WT2	200mm PRECAST CONCRETE PANEL - STANDARD GREY INTERNALLY, REFER ELEVATIONS FOR EXTERNAL CONCRETE COLOURS	120/120/120	WHEN LINED WITH WT5 OR WT6, 90mm R2.5 BRADFORD GW NON-COMBUSTUBLE INSULATION TO INSIDE OF EXTERNAL WALLS, BOTH SIDES OF PARTY WALLS, & SOU SIDE OF SOU TO LOBBY AREAS	Rw 50 AND MIN Rw + Ctr 50 IF DISCONT. CONSTRUCTION - MIN AIR GAP 20mm - OR IF NO LINING
WT3	100mm PRECAST CONCRETE PANEL - STANDARD GREY INTERNALLY, REFER ELEVATIONS FOR EXTERNAL CONCRETE COLOURS	60/60/60	WHEN LINED WITH WT5 OR WT6, 90mm R2.5 BRADFORD GW NON-COMBUSTIBLE INSULATION TO INSIDE OF EXTERNAL WALLS, BOTH SIDES OF PARTY WALLS, & SOU SIDE OF SOU TO LOBBY AREAS	NA
WT4	HEBEL WALL (NON-LOADBEARING) - STEEL FRAMED, 75mm HEBEL, 50mm TOP HAT, 92mm STEEL STUD, 2 LAYERS 16mm FYRCHECK PLASTERBOARD FINISH INTERNALLY, FLUSHED & PAINTED, HEBEL RENDERED AND PAINTED TO 3 COAT SYSTEM.	--/120/120 - OUTSIDE ONLY	90mm R2.5 BRADFORD GW NON-COMBUSTIBLE INSULATION WITHIN 92mm STEEL STUD, FOIL BACKED SISILATION FIXED TO STEEL STUDS.	Rw 50 & Rw + Ctr 50
WT5	64mm STEEL STUDS AT 600mm MAX CTS, TO WT1 PARTYWALLS AND EXTERNAL WALLS. 25mm CAVITY (DISCONTINUOUS CONSTRUCTION)	--/--/--	90mm R2.5 BRADFORD GW NON-COMBUSTIBLE INSULATION BATTS	WHEN COMBINING WT1 WITH WT5 AND 25mm CAVITY, Rw 50 AND Rw + Ctr 50 ACHIEVED
WT6	92mm STEEL STUDS AT MAX 600mm CTS.	--/--/--	R2.5 BRADFORD GW NON-COMBUSTIBLE INSULATION BATTS TO EXTERNAL WALLS AND R2.0 INSULATION BATTS TO INTERNAL WALLS WITHIN APARTMENTS	NA
WT7	92mm STEEL STUD USED FOR BATHROOM & LAUNDRY PODS.	--/--/--	R2.0 GW INSULATION BATTS (11kg/m³)	NA
WT8	LIGHTWEIGHT PARTYWALL, CSR1355, TWO ROWS OF 64mm STEEL STUDS WITH 20mm CAVITY, TWO LAYERS OF 13mm FYRCHECK TO BOTH SIDES OF WALL	90/90/90	75mm R1.7 GW ACOUSTIGARD NON-COMBUSTIBLE TO ONE SIDE & 75mm R2.0 NON-COMBUSTIBLE INSULATION BATT TO OTHER SIDE (11kg/m³)	Rw 61 & Rw + Ctr 52
WT8a	LIGHTWEIGHT PARTYWALL, CSR1355, TWO ROWS OF 64mm STEEL STUDS WITH 80mm CAVITY, TWO LAYERS OF 13mm FYRCHECK TO BOTH SIDES OF WALL	90/90/90	75mm R1.7 GW ACOUSTIGARD NON-COMBUSTIBLE TO ONE SIDE & 75mm R2.0 NON-COMBUSTIBLE INSULATION BATT TO OTHER SIDE (11kg/m³)	Rw 61 & Rw + Ctr 52
WT9	LIGHTWEIGHT EXTERNAL WALL, CSR5174, 6mm FIBRE CEMENT SHEET (RENDERED AND PAINTED) ON 35mm TOP HATS, 2 x LAYERS 16mm FYRCHECK MR TO EXTERNAL SIDE OF 92mm STEEL STUDS AND 2 x LAYERS OF 16mm FYRCHECK TO INTERNAL FACE, FLUSHED AND PAINTED TO SELECTION	90/90/90	90mm R2.5 BRADFORD GW NON-COMBUSTIBLE INSULATION BATTS	Rw 53 & Rw + Ctr 44
WT10	2100h COLORBOND FENCING OR SIMILAR	--/--/--	NA	NA
WT11	600mm PILES WITH 150mm SHOTCRETE INTERNALLY	180/180/180	NA	NA
WT14	STOREFRONT GLASS WALL WITH ALUMINIUM FRAMES AND ENTRY DOORS PER ELEVATIONS. STILES AT 1050mm CTS.	--/--/--	NA	NA

14462 248 Unley Road
LUCID
DTS Insulation Markup
27.02.2019

1 WD.A.200 GROUND FLOOR PLAN
1 : 100

REVISIONS

ISSUE #	DATE	DESCRIPTION
P1	23/10/2018	PRELIM ISSUE 1
P2	30/10/2018	PRELIM ISSUE 2
P3	27/11/2018	PRELIM ISSUE 3
P4	23/01/2018	PRELIM ISSUE 4
P5	12/02/2019	PRELIM ISSUE 5
P6	20/02/2019	PRELIM ISSUE 6

ESS
AD HYDE PARK

HYDE PARK PLACE

CLIENT
HYDE PARK PLACE PTY LTD

CITIFY bfc

SHEET
GROUND FLOOR PLAN

WD.A.102

AUTHOR
GB

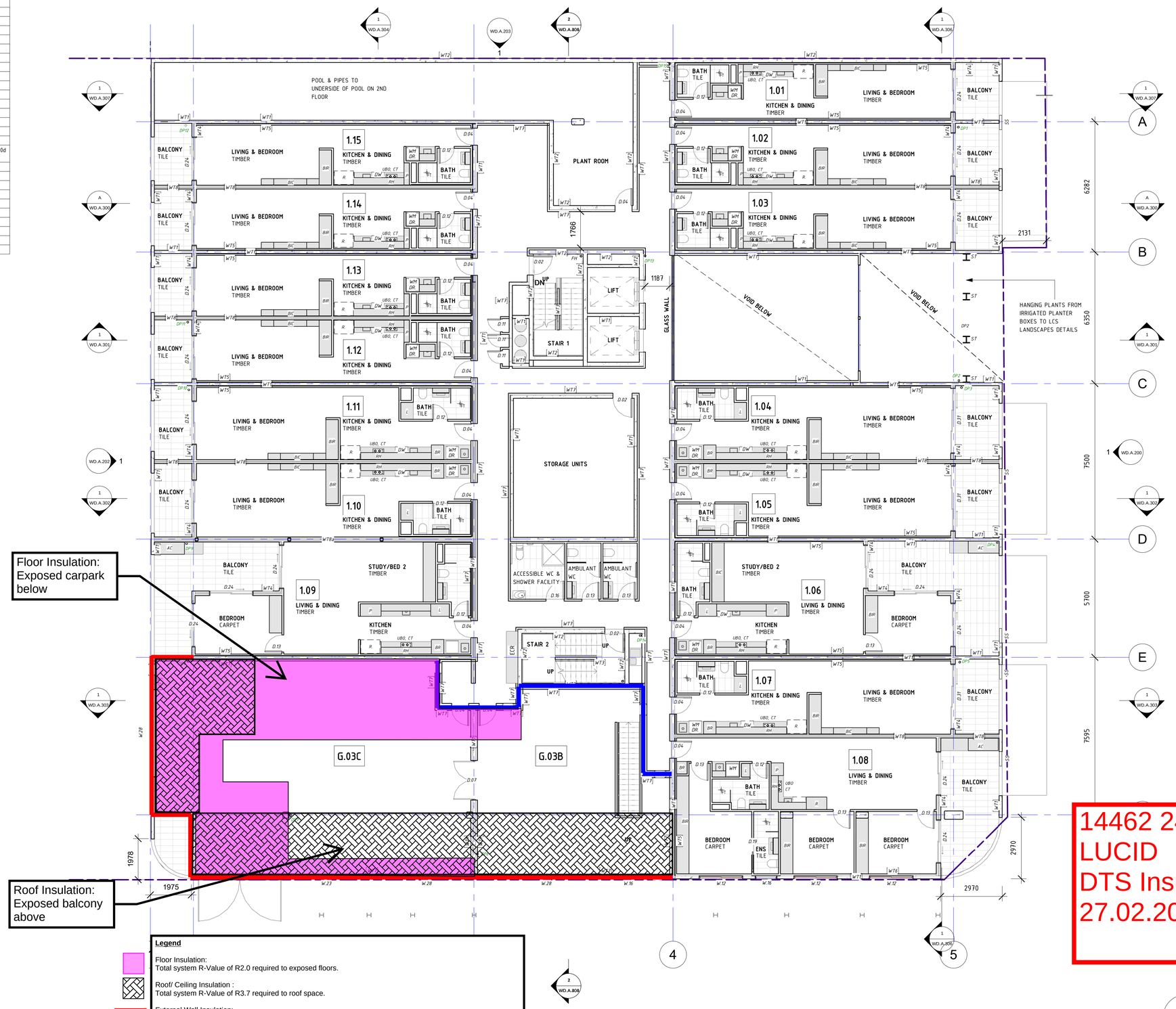
ISSUE
PRELIM ISSUE 6

A1 1:100; A3 1:200

PRELIMINARY - NOT FOR CONSTRUCTION

GEMMA | LEA DESIGN STUDIO
www.gemmalea.com.au
gemma@gemmalea.com.au
ABN: 39 882 991 838

KEY	
KEY	DESCRIPTION
AC	AIR CONDITIONING CONDENSER. WHERE ON BALCONY CONCEAL IN FULL HEIGHT VENTILATION CUPBOARD WITH LOUVRE DOORS.
BIR	BUILT IN ROBE
BL	BOLLARD
BR	BROOM/TALL CUPBOARD
COL.	STRUCTURAL CONCRETE COLUMN TO ENG'S DTLS
CT	COOKTOP (GAS)
DM	DOORMAT
DR.	MACHINE DRYER SPACE
DW	DISHWASHER
ECR	ELECTRICAL & COMMUNICATIONS RISER CUPBOARD
FC	FEATURE ARCHITECTURAL COLUMN
FH	FIRE HYDRANT RISER
FT	FLOOR TRAP
GA	IN-GROUND GREASE ARRESTOR
L	LINEN CUPBOARD
LD	LINEAR DRAIN
MSB	MAIN SWITCH BOARD
NBN	NBN/DATA CABINET
OBS	OVER BONNET STORAGE UNIT - 1000mm CLEAR - 1100h x 2400w x 810d (TOTAL HEIGHT 2320)
P	PANTRY CUPBOARD
PL	PLANTER BOX (REQUIRES DRAINAGE AND TANKING
R.	REFRIGERATOR SPACE
RH	RANGEHOOD WITH DUCTING TO OUTSIDE
SHS	SHS COLUMN TO ENG'S DTLS
ST	FEATURE STEEL COLUMNS TO ENG'S DTLS
UBO	UNDER BENCH OVEN
WIR	WALK IN ROBE
WM	WASHING MACHINE SPACE WITH FLOOR TRAP UNDER AND TAPS
WO	WALL OVEN



Legend

Floor Insulation:
Total system R-Value of R2.0 required to exposed floors.

Roof/ Ceiling Insulation :
Total system R-Value of R3.7 required to roof space.

External Wall Insulation:
Total system R-Value of R2.8 required to external walls.

Internal Wall Insulation
Total system R-Value of R1.0 required to internal partitions where the neighbouring unconditioned space is unventilated.

Internal Wall Insulation:
Total system R-Value of R1.8 required to internal partitions where the neighbouring unconditioned space is highly ventilated.

WALL SCHEDULE				
TAG	CONSTRUCTION	FRL	INSULATION	ACOUSTIC
WT1	150mm PRECAST CONCRETE PANEL - STANDARD GREY INTERNALLY, REFER ELEVATIONS FOR EXTERNAL CONCRETE COLOURS	90/90/90	WHEN LINED WITH WT5 OR WT6, 90mm R2.5 BRADFORD GW NON-COMBUSTIBLE INSULATION TO INSIDE OF EXTERNAL WALLS, BOTH SIDES OF PARTY WALLS, & SOU SIDE OF SOU TO LOBBY AREAS	Rw 50 AND MIN Rw + Ctr 50 IF DISCONT. CONSTRUCTION - MIN AIR GAP 20mm - OR IF NO LINING
WT2	200mm PRECAST CONCRETE PANEL - STANDARD GREY INTERNALLY, REFER ELEVATIONS FOR EXTERNAL CONCRETE COLOURS	120/120/120	WHEN LINED WITH WT5 OR WT6, 90mm R2.5 BRADFORD GW NON-COMBUSTIBLE INSULATION TO INSIDE OF EXTERNAL WALLS, BOTH SIDES OF PARTY WALLS, & SOU SIDE OF SOU TO LOBBY AREAS	Rw 50 AND MIN Rw + Ctr 50 IF DISCONT. CONSTRUCTION - MIN AIR GAP 20mm - OR IF NO LINING
WT3	100mm PRECAST CONCRETE PANEL - STANDARD GREY INTERNALLY, REFER ELEVATIONS FOR EXTERNAL CONCRETE COLOURS	60/60/60	WHEN LINED WITH WT5 OR WT6, 90mm R2.5 BRADFORD GW NON-COMBUSTIBLE INSULATION TO INSIDE OF EXTERNAL WALLS, BOTH SIDES OF PARTY WALLS, & SOU SIDE OF SOU TO LOBBY AREAS	NA
WT4	HEBEL WALL (NON-LOADBEARING) - STEEL FRAMED. 75mm HEBEL, 50mm TOP HAT, 92mm STEEL STUD, 2 LAYERS 16mm FYRCHECK PLASTERBOARD FINISH INTERNALLY, FLUSHED & PAINTED. HEBEL RENDERED AND PAINTED TO 3 COAT SYSTEM	--/120/120 - OUTSIDE ONLY	90mm R2.5 BRADFORD GW NON-COMBUSTIBLE INSULATION WITHIN 92mm STEEL STUD. FOIL BACKED SISLATION FIXED TO STEEL STUDS.	Rw 50 & Rw + Ctr 50
WT5	64mm STEEL STUDS AT 600mm MAX CTS. TO WT1 PARTYWALLS AND EXTERNAL WALLS. 25mm CAVITY (DISCONTINUOUS CONSTRUCTION)	--/--/--	90mm R2.5 BRADFORD GW NON-COMBUSTIBLE INSULATION BATTS	WHEN COMBINING WT1 WITH WT5 AND 25mm CAVITY, Rw 50 AND Rw + Ctr 50 ACHIEVED
WT6	92mm STEEL STUDS AT MAX 600mm CTS.	--/--/--	R2.5 BRADFORD GW NON-COMBUSTIBLE INSULATION BATTS TO EXTERNAL WALLS AND R2.0 INSULATION BATTS TO INTERNAL WALLS WITHIN APARTMENTS	NA
WT7	92mm STEEL STUD USED FOR BATHROOM & LAUNDRY PODS.	--/--/--	R2.0 GW INSULATION BATTS (11kg/m³)	NA
WT8	LIGHTWEIGHT PARTYWALL. CSR1355. TWO ROWS OF 64mm STEEL STUDS WITH 20mm CAVITY. TWO LAYERS OF 13mm FYRCHECK TO BOTH SIDES OF WALL	90/90/90	75mm R1.7 GW ACOUSTIGARD NON-COMBUSTIBLE TO ONE SIDE & 75mm R2.0 NON-COMBUSTIBLE INSULATION BATT TO OTHER SIDE (11kg/m³)	Rw 61 & Rw + Ctr 52
WT8a	LIGHTWEIGHT PARTYWALL. CSR1355. TWO ROWS OF 64mm STEEL STUDS WITH 80mm CAVITY. TWO LAYERS OF 13mm FYRCHECK TO BOTH SIDES OF WALL	90/90/90	75mm R1.7 GW ACOUSTIGARD NON-COMBUSTIBLE TO ONE SIDE & 75mm R2.0 NON-COMBUSTIBLE INSULATION BATT TO OTHER SIDE (11kg/m³)	Rw 61 & Rw + Ctr 52
WT9	LIGHTWEIGHT EXTERNAL WALL. CSR5174. 6mm FIBRE CEMENT SHEET (RENDERED AND PAINTED) ON 35mm TOP HATS. 2 x LAYERS 16mm FYRCHECK MR TO EXTERNAL SIDE OF 92mm STEEL STUDS AND 2 x LAYERS OF 16mm FYRCHECK TO INTERNAL FACE, FLUSHED AND PAINTED TO SELECTION	90/90/90	90mm R2.5 BRADFORD GW NON-COMBUSTIBLE INSULATION BATTS	Rw 53 & Rw + Ctr 44
WT10	2100h COLORBOND FENCING OR SIMILAR	--/--/--	NA	NA
WT11	600mm PILES WITH 150mm SHOTCRETE INTERNALLY	180/180/180	NA	NA
WT14	STOREFRONT GLASS WALL WITH ALUMINIUM FRAMES AND ENTRY DOORS PER ELEVATIONS. STILES AT 1050mm CTS.	--/--/--	NA	NA

14462 248 Unley Road
LUCID
DTS Insulation Markup
27.02.2019

1 WD.A.200 — 1ST FLOOR PLAN
1 : 100

This drawing shows design features and information that has been prepared by Gemma Lea and it is to be used only for the purpose intended in writing by the designers. It cannot be copied, reproduced, or indirectly, in whole or in part, nor shall it be used for any other purposes. Drawings shall not be used for construction purposes until issued by the designer for construction.

REVISIONS

ISSUE #	DATE	DESCRIPTION
P1	23/10/2018	PRELIM ISSUE 1
P2	30/10/2018	PRELIM ISSUE 2
P3	27/11/2018	PRELIM ISSUE 3
P4	23/01/2018	PRELIM ISSUE 4
P5	12/02/2019	PRELIM ISSUE 5
P6	20/02/2019	PRELIM ISSUE 6

41074

ESS
AD HYDE PARK
HYDE PARK PLACE

CLIENT
HYDE PARK PLACE PTY LTD
CITIFY bfc

SHEET
1ST FLOOR PLAN
WD.A.103

AUTHOR
GB

ISSUE
PRELIM ISSUE 6

A1 1:100; A3 1:200

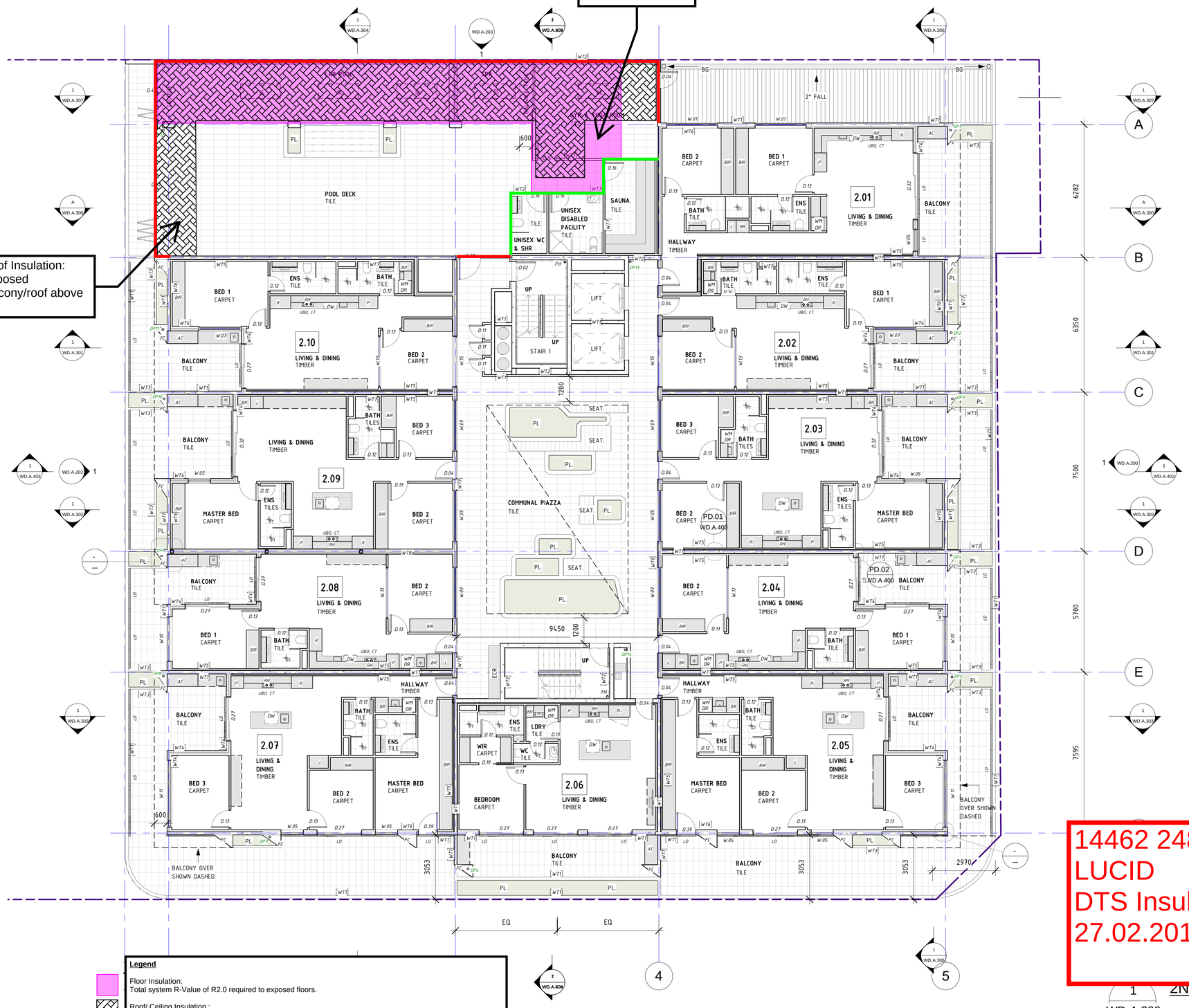
PRELIMINARY - NOT FOR CONSTRUCTION

GEMMA | LEA DESIGN STUDIO
www.gemmalea.com.au
gemma@gemmalea.com.au
ABN: 39 882 991 838

KEY	
KEY	DESCRIPTION
AC	AIR CONDITIONING CONDENSER. WHERE ON BALCONY CONCEAL IN FULL HEIGHT VENTILATION CUPBOARD WITH LOUVRE DOORS.
BIR	BUILT IN ROBE
BL.	BOLLARD
BR	BROOM/TALL CUPBOARD
COL.	STRUCTURAL CONCRETE COLUMN TO ENG'S DTLS
CT	COOKTOP (GAS)
DM	DOORMAT
DR.	MACHINE DRYER SPACE
DW	DISHWASHER
ECR	ELECTRICAL & COMMUNICATIONS RISER CUPBOARD
FC	FEATURE ARCHITECTURAL COLUMN
FH	FIRE HYDRANT RISER
FT	FLOOR TRAP
GA	IN-GROUND GREASE ARRESTOR
L	LINEN CUPBOARD
LD	LINEAR DRAIN
MSB	MAIN SWITCH BOARD
NBN	NBN/DATA CABINET
OBS	OVER BONNET STORAGE UNIT - 1000mm CLEAR - 1100h x 2400w x 810d (TOTAL HEIGHT 2320)
P	PANTRY CUPBOARD
PL	PLANTER BOX (REQUIRES DRAINAGE AND TANKING
R.	REFRIGERATOR SPACE
RH	RANGEHOOD WITH DUCTING TO OUTSIDE
SHS	SHS COLUMN TO ENG'S DTLS
ST	FEATURE STEEL COLUMNS TO ENG'S DTLS
UBO	UNDER BENCH OVEN
WIR	WALK IN ROBE
WM	WASHING MACHINE SPACE WITH FLOOR TRAP UNDER AND TAPS
WO	WALL OVEN

Floor Insulation:
Plant room below.

Roof Insulation:
Exposed balcony/roof above



Legend

Floor Insulation:
Total system R-Value of R2.0 required to exposed floors.

Roof/ Ceiling Insulation :
Total system R-Value of R3.7 required to roof space.

External Wall Insulation:
Total system R-Value of R2.8 required to external walls.

Internal Wall Insulation
Total system R-Value of R1.0 required to internal partitions where the neighbouring unconditioned space is unventilated.

Internal Wall Insulation:
Total system R-Value of R1.8 required to internal partitions where the neighbouring unconditioned space is highly ventilated.

WALL SCHEDULE				
TAG	CONSTRUCTION	FRL	INSULATION	ACOUSTIC
WT1	150mm PRECAST CONCRETE PANEL - STANDARD GREY INTERNALLY, REFER ELEVATIONS FOR EXTERNAL CONCRETE COLOURS	90/90/90	WHEN LINED WITH WT5 OR WT6, 90mm R2.5 BRADFORD GW NON-COMBUSTIBLE INSULATION TO INSIDE OF EXTERNAL WALLS, BOTH SIDES OF PARTY WALLS, & SOU SIDE OF SOU TO LOBBY AREAS	Rw 50 AND MIN Rw + Ctr 50 IF DISCONT. CONSTRUCTION - MIN AIR GAP 20mm - OR IF NO LINING
WT2	200mm PRECAST CONCRETE PANEL - STANDARD GREY INTERNALLY, REFER ELEVATIONS FOR EXTERNAL CONCRETE COLOURS	120/120/120	WHEN LINED WITH WT5 OR WT6, 90mm R2.5 BRADFORD GW NON-COMBUSTIBLE INSULATION TO INSIDE OF EXTERNAL WALLS, BOTH SIDES OF PARTY WALLS, & SOU SIDE OF SOU TO LOBBY AREAS	Rw 50 AND MIN Rw + Ctr 50 IF DISCONT. CONSTRUCTION - MIN AIR GAP 20mm - OR IF NO LINING
WT3	100mm PRECAST CONCRETE PANEL - STANDARD GREY INTERNALLY, REFER ELEVATIONS FOR EXTERNAL CONCRETE COLOURS	60/60/60	WHEN LINED WITH WT5 OR WT6, 90mm R2.5 BRADFORD GW NON-COMBUSTIBLE INSULATION TO INSIDE OF EXTERNAL WALLS, BOTH SIDES OF PARTY WALLS, & SOU SIDE OF SOU TO LOBBY AREAS	NA
WT4	HEBEL WALL (NON-LOADBEARING) - STEEL FRAMED. 75mm HEBEL, 50mm TOP HAT, 92mm STEEL STUD. 2 LAYERS 16mm FYRCHECK PLASTERBOARD FINISH INTERNALLY, FLUSHED & PAINTED. HEBEL RENDERED AND PAINTED TO 3 COAT SYSTEM	--/120/120 - OUTSIDE ONLY	90mm R2.5 BRADFORD GW NON-COMBUSTIBLE INSULATION WITHIN 92mm STEEL STUD. FOIL BACKED SISLATION FIXED TO STEEL STUDS.	Rw 50 & Rw + Ctr 50
WT5	64mm STEEL STUDS AT 600mm MAX CTS. TO WT1 PARTYWALLS AND EXTERNAL WALLS. 25mm CAVITY (DISCONTINUOUS CONSTRUCTION)	--/--/--	90mm R2.5 BRADFORD GW NON-COMBUSTIBLE INSULATION BATTS	WHEN COMBINING WT1 WITH WT5 AND 25mm CAVITY, Rw 50 AND Rw + Ctr 50 ACHIEVED
WT6	92mm STEEL STUDS AT MAX 600mm CTS.	--/--/--	R2.5 BRADFORD GW NON-COMBUSTIBLE INSULATION BATTS TO EXTERNAL WALLS AND R2.0 INSULATION BATTS TO INTERNAL WALLS WITHIN APARTMENTS	NA
WT7	92mm STEEL STUD USED FOR BATHROOM & LAUNDRY PODS.	--/--/--	R2.0 GW INSULATION BATTS (11kg/m³)	NA
WT8	LIGHTWEIGHT PARTYWALL. CSR1355. TWO ROWS OF 64mm STEEL STUDS WITH 20mm CAVITY. TWO LAYERS OF 13mm FYRCHECK TO BOTH SIDES OF WALL	90/90/90	75mm R1.7 GW ACOUSTIGARD NON-COMBUSTIBLE TO ONE SIDE & 75mm R2.0 NON-COMBUSTIBLE INSULATION BATT TO OTHER SIDE (11kg/m³)	Rw 61 & Rw + Ctr 52
WT8a	LIGHTWEIGHT PARTYWALL. CSR1355. TWO ROWS OF 64mm STEEL STUDS WITH 80mm CAVITY. TWO LAYERS OF 13mm FYRCHECK TO BOTH SIDES OF WALL	90/90/90	75mm R1.7 GW ACOUSTIGARD NON-COMBUSTIBLE TO ONE SIDE & 75mm R2.0 NON-COMBUSTIBLE INSULATION BATT TO OTHER SIDE (11kg/m³)	Rw 61 & Rw + Ctr 52
WT9	LIGHTWEIGHT EXTERNAL WALL. CSR5174. 6mm FIBRE CEMENT SHEET (RENDERED AND PAINTED) ON 35mm TOP HATS. 2 x LAYERS 16mm FYRCHECK MR TO EXTERNAL SIDE OF 92mm STEEL STUDS AND 2 x LAYERS OF 16mm FYRCHECK TO INTERNAL FACE. FLUSHED AND PAINTED TO SELECTION	90/90/90	90mm R2.5 BRADFORD GW NON-COMBUSTIBLE INSULATION BATTS	Rw 53 & Rw + Ctr 44
WT10	2100h COLORBOND FENCING OR SIMILAR	--/--/--	NA	NA
WT11	600mm PILES WITH 150mm SHOTCRETE INTERNALLY	180/180/180	NA	NA
WT14	STOREFRONT GLASS WALL WITH ALUMINIUM FRAMES AND ENTRY DOORS PER ELEVATIONS. STILES AT 1050mm CTS.	--/--/--	NA	NA

14462 248 Unley Road
LUCID
DTS Insulation Markup
27.02.2019

1 2ND FLOOR PLAN
WD.A.200 1 : 100

REVISIONS

ISSUE #	DATE	DESCRIPTION
P1	23/10/2018	PRELIM ISSUE 1
P2	30/10/2018	PRELIM ISSUE 2
P3	27/11/2018	PRELIM ISSUE 3
P4	23/01/2018	PRELIM ISSUE 4
P5	12/02/2019	PRELIM ISSUE 5
P6	20/02/2019	PRELIM ISSUE 6

ESS
AD HYDE PARK

HYDE PARK PLACE

CLIENT
HYDE PARK PLACE PTY LTD

CITIFY bfc

SHEET
2ND FLOOR PLAN

WD.A.104

AUTHOR
GB

ISSUE
PRELIM ISSUE 6

A1 1:100; A3 1:200

PRELIMINARY - NOT FOR CONSTRUCTION

GEMMA | LEA DESIGN STUDIO
www.gemmalea.com.au
gemma@gemmalea.com.au
ABN: 39 882 991 838

APPENDIX B –GLAZING CALCULATIONS

NCC VOLUME ONE GLAZING CALCULATOR (first issued with NCC 2014)

Building name/description: **248 Unley Road - Mixed-use development**

Application: **other**

Climate zone: **5**

Storey: **Ground**

Facade areas

	N	NE	E	SE	S	SW	W	NW	internal
Option A	128m²		116m²		143m²				
Option B									n/a
Glazing area (A)	*3.68m²*	.....	*79.7m²*	.....	*71.4m²*				

Number of rows preferred in table below: **20** *(as currently displayed)*

GLAZING ELEMENTS, ORIENTATION SECTOR, SIZE and PERFORMANCE CHARACTERISTICS											SHADING		CALCULATED OUTCOMES OK (if inputs are valid)					
Glazing element		Facing sector		Size			Performance				P&H or device		Shading		Multipliers		Size	Outcomes
ID	Description (optional)	Option A facades	Option B facades	Height (m)	Width (m)	Area (m²)	Total System U-Value (AFRC)	Total System SHGC (AFRC)			P (m)	H (m)	P/H	G (m)	Heating (S_H)	Cooling (S_C)	Area used (m²)	Element share of % of allowance used
1	T1 W.22 & W.23	E		2.65	7.20		5.3	0.28			2.220	3.800	0.58	1.15	0.94	0.88	19.08	27% of 98%
2	T1 W.25 &W.26	E		0.70	7.20		5.3	0.28			2.220	1.000	2.22	0.30	0.03	0.32	5.04	3% of 98%
3	T2 W.22 & W.23	E		2.65	16.60		5.3	0.28			2.140	3.800	0.56	1.15	0.95	0.89	43.99	63% of 98%
4	T2 W.25 &W.26	E		0.70	16.60		5.3	0.28			2.140	1.000	2.14	0.30	0.03	0.32	11.62	7% of 98%
5													ROW SKIPPED (OK if intentional)					
6	T1 W.07	S		3.50	1.05		5.3	0.28						0.00	1.00	1.00	3.68	5% of 100%
7	T2 W.07	S		3.50	1.05		5.3	0.28			1.700	3.800	0.45	0.30	0.92	0.87	3.68	5% of 100%
8	T2 D.33	S		3.30	8.85		5.3	0.28			3.050	3.800	0.80	0.50	0.84	0.76	29.21	41% of 100%
9	T3 W.24	S		2.65	6.30		5.3	0.28			1.000	3.500	0.29	0.85	0.98	0.97	16.70	24% of 100%
10	T3 W.27	S		0.70	6.30		5.3	0.28			1.000	0.700	1.43	0.00	0.69	0.59	4.41	6% of 100%
11	T3 W.33	S		2.65	1.05		5.3	0.28			1.000	3.500	0.29	0.85	0.98	0.97	2.78	4% of 100%
12	T3 W.37	S		0.70	1.05		5.3	0.28			1.000	0.700	1.43	0.00	0.69	0.59	0.74	1% of 100%
13	T3 W.22	S		2.65	3.05		5.3	0.28			1.000	3.500	0.29	0.85	0.98	0.97	8.08	11% of 100%
14	T3 W.25	S		0.70	3.05		5.3	0.28			1.000	0.700	1.43	0.00	0.69	0.59	2.14	3% of 100%
15													ROW SKIPPED (OK if intentional)					
16	T2 W.07	N		3.50	1.05		5.3	0.28						0.00	1.00	1.00	3.68	100% of 5%
17																		
18																		
19																		
20																		

NCC VOLUME ONE GLAZING CALCULATOR (first issued with NCC 2014)

Building name/description: **248 Unley Rd**

Application: **other**

Climate zone: **5**

Storey: **FF**

Facade areas

	N	NE	E	SE	S	SW	W	NW	internal
Option A					67.5m²		29m²		
Option B									n/a
Glazing area (A)					*22.6m²*		*12.8m²*		

Number of rows preferred in table below: **8** *(as currently displayed)*

GLAZING ELEMENTS, ORIENTATION SECTOR, SIZE and PERFORMANCE CHARACTERISTICS										SHADING		CALCULATED OUTCOMES OK (if inputs are valid)					
Glazing element		Facing sector		Size			Performance			P&H or device		Shading		Multipliers		Size	Outcomes
ID	Description (optional)	Option A facades	Option B facades	Height (m)	Width (m)	Area (m²)	Total System U-Value (AFRC)	Total System SHGC (AFRC)		P (m)	H (m)	P/H	G (m)	Heating (S_H)	Cooling (S_C)	Area used (m²)	Element share of % of allowance used
1	G.03C W.31	W		1.50	4.20		5.3	0.41					0.00	1.00	1.00	6.30	56% of 100%
2	G.03C - door	W		2.40	2.70		5.3	0.41		1.790	2.700	0.66	0.30	0.82	0.71	6.48	44% of 100%
3												ROW SKIPPED (OK if intentional)					
4	G.03C - door	S		2.40	1.58		5.3	0.41		1.900	2.700	0.70	0.30	0.86	0.79	3.79	16% of 67%
5	G.03C W.30	S		1.50	3.10		5.3	0.41					0.00	1.00	1.00	4.65	21% of 67%
6	G.03C W.31	S		1.50	4.20		5.3	0.41					0.00	1.00	1.00	6.30	28% of 67%
7	G.03B W.31	S		1.50	4.20		5.3	0.41					0.00	1.00	1.00	6.30	28% of 67%
8	G.03B W.28	S		1.50	1.05		5.3	0.41					0.00	1.00	1.00	1.58	7% of 67%

IMPORTANT NOTICE AND DISCLAIMER IN RESPECT OF THE GLAZING CALCULATOR

The Glazing Calculator has been developed by the ABCB to assist in developing a better understanding of glazing energy efficiency parameters.
While the ABCB believes that the Glazing Calculator, if used correctly, will produce accurate results, it is provided "as is" and without any representation or warranty of any kind, including that it is fit for any purpose or of merchantable quality, or functions as intended or at all.
Your use of the Glazing Calculator is entirely at your own risk and the ABCB accepts no liability of any kind.

if inputs are valid

NCC VOLUME ONE GLAZING CALCULATOR (first issued with NCC 2014)

Building name/description: **248 Unley Rd**

Application: **other**

Climate zone: **5**

Storey: **SF**

Facade areas

	N	NE	E	SE	S	SW	W	NW	internal
Option A							27.5m²		
Option B									n/a

Glazing area (A) *19.4m²*

Number of rows preferred in table below: **8** *(as currently displayed)*

GLAZING ELEMENTS, ORIENTATION SECTOR, SIZE and PERFORMANCE CHARACTERISTICS										SHADING		CALCULATED OUTCOMES OK (if inputs are valid)					
Glazing element		Facing sector		Size			Performance			P&H or device		Shading		Multipliers		Size	Outcomes
ID	Description (optional)	Option A facades	Option B facades	Height (m)	Width (m)	Area (m²)	Total System U-Value (AFRC)	Total System SHGC (AFRC)		P (m)	H (m)	P/H	G (m)	Heating (S_H)	Cooling (S_C)	Area used (m²)	Element share of % of allowance used
1	6 Door	W		2.40	5.39		3.4	0.21					0.00	1.00	1.00	12.94	67% of 100%
2	3 Door	W		2.40	2.70		3.4	0.21					0.00	1.00	1.00	6.48	33% of 100%
3																	
4																	
5																	
6																	
7																	
8																	

IMPORTANT NOTICE AND DISCLAIMER IN RESPECT OF THE GLAZING CALCULATOR

The Glazing Calculator has been developed by the ABCB to assist in developing a better understanding of glazing energy efficiency parameters.
While the ABCB believes that the Glazing Calculator, if used correctly, will produce accurate results, it is provided "as is" and without any representation or warranty of any kind, including that it is fit for any purpose or of merchantable quality, or functions as intended or at all.
Your use of the Glazing Calculator is entirely at your own risk and the ABCB accepts no liability of any kind.

if inputs are valid