

BASIX[®]Certificate

Building Sustainability Index www.basix.nsw.gov.au

Single Dwelling

Certificate number: 1034563S




This certificate confirms that the proposed development will meet the NSW government's requirements for sustainability, if it is built in accordance with the commitments set out below. Terms used in this certificate, or in the commitments, have the meaning given by the document entitled "BASIX Definitions" dated 06/10/2017 published by the Department. This document is available at www.basix.nsw.gov.au

Secretary

Date of issue: Wednesday, 07 August 2019

To be valid, this certificate must be lodged within 3 months of the date of issue.



Project summary		
Project name	192120	
Street address	Lot 3332 Proposed Road 028 Road Jordan Springs 2747	
Local Government Area	Penrith City Council	
Plan type and plan number	deposited -	
Lot no.	3332	
Section no.	-	
Project type	separate dwelling house	
No. of bedrooms	4	
Project score		
Water	 40	Target 40
Thermal Comfort	 Pass	Target Pass
Energy	 50	Target 50

Certificate Prepared by
Name / Company Name: Accelerate Sustainability Assessments
ABN (if applicable): 81625027778

Description of project

Project address

Project name	192120
Street address	Lot 3332 Proposed Road 028 Road Jordan Springs 2747
Local Government Area	Penrith City Council
Plan type and plan number	Deposited Plan -
Lot no.	3332
Section no.	-

Project type

Project type	separate dwelling house
No. of bedrooms	4

Site details

Site area (m ²)	280
Roof area (m ²)	160
Conditioned floor area (m2)	159.4
Unconditioned floor area (m2)	12.32
Total area of garden and lawn (m2)	153

Assessor details and thermal loads

Assessor number	n/a
Certificate number	n/a
Climate zone	n/a
Area adjusted cooling load (MJ/m ² .year)	n/a
Area adjusted heating load (MJ/m ² .year)	n/a

Project score

Water	✓ 40	Target 40
Thermal Comfort	✓ Pass	Target Pass
Energy	✓ 50	Target 50

Schedule of BASIX commitments

The commitments set out below regulate how the proposed development is to be carried out. It is a condition of any development consent granted, or complying development certificate issued, for the proposed development, that BASIX commitments be complied with.

Water Commitments	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
Fixtures			
The applicant must install showerheads with a minimum rating of 3 star (> 7.5 but <= 9 L/min) in all showers in the development.		✓	✓
The applicant must install a toilet flushing system with a minimum rating of 4 star in each toilet in the development.		✓	✓
The applicant must install taps with a minimum rating of 3 star in the kitchen in the development.		✓	
The applicant must install basin taps with a minimum rating of 5 star in each bathroom in the development.		✓	
Alternative water			
Rainwater tank			
The applicant must install a rainwater tank of at least 2500 litres on the site. This rainwater tank must meet, and be installed in accordance with, the requirements of all applicable regulatory authorities.	✓	✓	✓
The applicant must configure the rainwater tank to collect rain runoff from at least 159.8 square metres of the roof area of the development (excluding the area of the roof which drains to any stormwater tank or private dam).		✓	✓
The applicant must connect the rainwater tank to: <ul style="list-style-type: none"> all toilets in the development the cold water tap that supplies each clothes washer in the development at least one outdoor tap in the development (Note: NSW Health does not recommend that rainwater be used for human consumption in areas with potable water supply.) 		✓ ✓ ✓	✓ ✓ ✓

Thermal Comfort Commitments	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
General features			
The dwelling must not have more than 2 storeys.	✓	✓	✓
The conditioned floor area of the dwelling must not exceed 300 square metres.	✓	✓	✓
The dwelling must not contain open mezzanine area exceeding 25 square metres.	✓	✓	✓
The dwelling must not contain third level habitable attic room.	✓	✓	✓
Floor, walls and ceiling/roof			
The applicant must construct the floor(s), walls, and ceiling/roof of the dwelling in accordance with the specifications listed in the table below.	✓	✓	✓

Construction	Additional insulation required (R-Value)	Other specifications
floor - concrete slab on ground, 75 square metres	nil	
floor - above habitable rooms or mezzanine, 8 square metres, framed	nil	
floor - suspended floor above garage, framed	0.3 (or 1 including construction) (down)	
external wall - brick veneer	2.06 (or 2.60 including construction)	
external wall - framed (weatherboard, fibre cement, metal clad)	2.20 (or 2.60 including construction)	
internal wall shared with garage - plasterboard	nil	
ceiling and roof - flat ceiling / pitched roof	ceiling: 4 (up), roof: foil/sarking	unventilated; dark (solar absorptance > 0.70)

Note	• Insulation specified in this Certificate must be installed in accordance with Part 3.12.1.1 of the Building Code of Australia.
Note	• In some climate zones, insulation should be installed with due consideration of condensation and associated interaction with adjoining building materials.

Thermal Comfort Commitments	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
Windows, glazed doors and skylights			
The applicant must install the windows, glazed doors and shading devices described in the table below, in accordance with the specifications listed in the table. Relevant overshadowing specifications must be satisfied for each window and glazed door.	✓	✓	✓
The dwelling may have 1 skylight (<0.7 square metres) which is not listed in the table.	✓	✓	✓
<p>The following requirements must also be satisfied in relation to each window and glazed door:</p> <ul style="list-style-type: none"> For the following glass and frame types, the certifier check can be performed by visual inspection. <ul style="list-style-type: none"> - Aluminium single clear - Aluminium double (air) clear - Timber/uPVC/fibreglass single clear - Timber/uPVC/fibreglass double (air) clear 	✓	✓	✓ ✓

Window/glazed door no.	Maximum height (mm)	Maximum width (mm)	Type	Shading Device (Dimension within 10%)	Overshadowing
North-East facing					
Bed 2	1800	800	aluminium, single, clear	eave 560 mm, 0 mm above head of window or glazed door	not overshadowed
Ens	1500	600	aluminium, single, clear	eave 560 mm, 0 mm above head of window or glazed door	not overshadowed
South-East facing					
Family	2100	2600	aluminium, single, clear	solid overhang 2745 mm, 150 mm above head of window or glazed door	not overshadowed
Dining	1800	2700	aluminium, single, clear	eave 560 mm, 100 mm above head of window or glazed door	not overshadowed
Bed 3	1000	1800	aluminium, single, clear	eave 560 mm, 0 mm above head of window or glazed door	not overshadowed
Bed 4	1000	1800	aluminium, single, clear	eave 560 mm, 0 mm above head of window or glazed door	not overshadowed


Window/glazed door no.	Maximum height (mm)	Maximum width (mm)	Type	Shading Device (Dimension within 10%)	Overshadowing
South-West facing					
Dining	2100	1800	aluminium, single, clear	solid overhang 3450 mm, 150 mm above head of window or glazed door	not overshadowed
Family	1800	800	aluminium, single, clear	none	not overshadowed
Family	1800	800	aluminium, single, clear	none	not overshadowed
Bath	1200	1400	aluminium, single, clear	eave 560 mm, 0 mm above head of window or glazed door	not overshadowed
Hall	1800	600	aluminium, single, clear	eave 560 mm, 0 mm above head of window or glazed door	not overshadowed
Stairs	600	1800	aluminium, single, clear	eave 560 mm, 0 mm above head of window or glazed door	not overshadowed
North-West facing					
Entry	2400	1050	aluminium, single, clear	solid overhang 1710 mm, 0 mm above head of window or glazed door	not overshadowed
Master	1800	600	aluminium, single, clear	eave 560 mm, 0 mm above head of window or glazed door	not overshadowed
Master	1800	1400	aluminium, single, clear	eave 560 mm, 0 mm above head of window or glazed door	not overshadowed
Master	1800	600	aluminium, single, clear	eave 560 mm, 0 mm above head of window or glazed door	not overshadowed
WIR	1500	1200	aluminium, single, clear	eave 560 mm, 0 mm above head of window or glazed door	not overshadowed


Energy Commitments	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
Hot water			
The applicant must install the following hot water system in the development, or a system with a higher energy rating: gas instantaneous with a performance of 6 stars.	✓	✓	✓
Cooling system			
The applicant must install the following cooling system, or a system with a higher energy rating, in at least 1 living area: 1-phase airconditioning; Energy rating: EER 3.0 - 3.5		✓	✓
The applicant must install the following cooling system, or a system with a higher energy rating, in at least 1 bedroom: 1-phase airconditioning; Energy rating: EER 3.0 - 3.5		✓	✓
Heating system			
The applicant must install the following heating system, or a system with a higher energy rating, in at least 1 living area: 1-phase airconditioning; Energy rating: EER 3.5 - 4.0		✓	✓
The applicant must install the following heating system, or a system with a higher energy rating, in at least 1 bedroom: 1-phase airconditioning; Energy rating: EER 3.5 - 4.0		✓	✓
Ventilation			
The applicant must install the following exhaust systems in the development:			
At least 1 Bathroom: individual fan, ducted to façade or roof; Operation control: manual switch on/off		✓	✓
Kitchen: individual fan, ducted to façade or roof; Operation control: manual switch on/off		✓	✓
Laundry: natural ventilation only, or no laundry; Operation control: n/a		✓	✓
Artificial lighting			
The applicant must ensure that the "primary type of artificial lighting" is fluorescent or light emitting diode (LED) lighting in each of the following rooms, and where the word "dedicated" appears, the fittings for those lights must only be capable of accepting fluorescent or light emitting diode (LED) lamps:			
• at least 4 of the bedrooms / study; dedicated		✓	✓
• at least 2 of the living / dining rooms; dedicated		✓	✓
• the kitchen; dedicated		✓	✓


Energy Commitments	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
<ul style="list-style-type: none"> all bathrooms/toilets; dedicated 		✓	✓
<ul style="list-style-type: none"> the laundry; dedicated 		✓	✓
<ul style="list-style-type: none"> all hallways; dedicated 		✓	✓
Natural lighting			
The applicant must install a window and/or skylight in 2 bathroom(s)/toilet(s) in the development for natural lighting.	✓	✓	✓
Other			
The applicant must install a gas cooktop & electric oven in the kitchen of the dwelling.		✓	
The applicant must construct each refrigerator space in the development so that it is "well ventilated", as defined in the BASIX definitions.		✓	
The applicant must install a fixed outdoor clothes drying line as part of the development.		✓	

Legend

In these commitments, "applicant" means the person carrying out the development.

Commitments identified with a  in the "Show on DA plans" column must be shown on the plans accompanying the development application for the proposed development (if a development application is to be lodged for the proposed development).

Commitments identified with a  in the "Show on CC/CDC plans and specs" column must be shown in the plans and specifications accompanying the application for a construction certificate / complying development certificate for the proposed development.

Commitments identified with a  in the "Certifier check" column must be certified by a certifying authority as having been fulfilled, before a final occupation certificate (either interim or final) for the development may be issued.

BASIX[®]Certificate

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Single Dwelling

Certificate number: 1034904S




This certificate confirms that the proposed development will meet the NSW government's requirements for sustainability, if it is built in accordance with the commitments set out below. Terms used in this certificate, or in the commitments, have the meaning given by the document entitled "BASIX Definitions" dated 06/10/2017 published by the Department. This document is available at www.basix.nsw.gov.au

Secretary

Date of issue: Wednesday, 07 August 2019

To be valid, this certificate must be lodged within 3 months of the date of issue.



Project summary		
Project name	192120.01	
Street address	Lot 3333 Proposed Road 028 Road Jordan Springs 2747	
Local Government Area	Penrith City Council	
Plan type and plan number	deposited -	
Lot no.	3333	
Section no.	-	
Project type	separate dwelling house	
No. of bedrooms	4	
Project score		
Water	 40	Target 40
Thermal Comfort	 Pass	Target Pass
Energy	 51	Target 50

Certificate Prepared by

Name / Company Name: Accelerate Sustainability Assessments

ABN (if applicable): 81625027778

Description of project

Project address

Project name	192120.01
Street address	Lot 3333 Proposed Road 028 Road Jordan Springs 2747
Local Government Area	Penrith City Council
Plan type and plan number	Deposited Plan -
Lot no.	3333
Section no.	-

Project type

Project type	separate dwelling house
No. of bedrooms	4

Site details

Site area (m²)	280
Roof area (m²)	160
Conditioned floor area (m2)	159.4
Unconditioned floor area (m2)	12.32
Total area of garden and lawn (m2)	123

Assessor details and thermal loads

Assessor number	n/a
Certificate number	n/a
Climate zone	n/a
Area adjusted cooling load (MJ/m².year)	n/a
Area adjusted heating load (MJ/m².year)	n/a

Project score

Water	✓ 40	Target 40
Thermal Comfort	✓ Pass	Target Pass
Energy	✓ 51	Target 50

Schedule of BASIX commitments

The commitments set out below regulate how the proposed development is to be carried out. It is a condition of any development consent granted, or complying development certificate issued, for the proposed development, that BASIX commitments be complied with.

Water Commitments	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
Fixtures			
The applicant must install showerheads with a minimum rating of 3 star (> 7.5 but <= 9 L/min) in all showers in the development.		✓	✓
The applicant must install a toilet flushing system with a minimum rating of 4 star in each toilet in the development.		✓	✓
The applicant must install taps with a minimum rating of 3 star in the kitchen in the development.		✓	
The applicant must install basin taps with a minimum rating of 5 star in each bathroom in the development.		✓	
Alternative water			
Rainwater tank			
The applicant must install a rainwater tank of at least 2000 litres on the site. This rainwater tank must meet, and be installed in accordance with, the requirements of all applicable regulatory authorities.	✓	✓	✓
The applicant must configure the rainwater tank to collect rain runoff from at least 159.8 square metres of the roof area of the development (excluding the area of the roof which drains to any stormwater tank or private dam).		✓	✓
The applicant must connect the rainwater tank to: <ul style="list-style-type: none"> all toilets in the development the cold water tap that supplies each clothes washer in the development at least one outdoor tap in the development (Note: NSW Health does not recommend that rainwater be used for human consumption in areas with potable water supply.) 		✓ ✓ ✓	✓ ✓ ✓

Thermal Comfort Commitments	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
General features			
The dwelling must not have more than 2 storeys.	✓	✓	✓
The conditioned floor area of the dwelling must not exceed 300 square metres.	✓	✓	✓
The dwelling must not contain open mezzanine area exceeding 25 square metres.	✓	✓	✓
The dwelling must not contain third level habitable attic room.	✓	✓	✓
Floor, walls and ceiling/roof			
The applicant must construct the floor(s), walls, and ceiling/roof of the dwelling in accordance with the specifications listed in the table below.	✓	✓	✓

Construction	Additional insulation required (R-Value)	Other specifications
floor - concrete slab on ground, 75 square metres	nil	
floor - above habitable rooms or mezzanine, 8 square metres, framed	nil	
floor - suspended floor above garage, framed	0.3 (or 1 including construction) (down)	
external wall - brick veneer	2.06 (or 2.60 including construction)	
external wall - framed (weatherboard, fibre cement, metal clad)	2.20 (or 2.60 including construction)	
internal wall shared with garage - plasterboard	nil	
ceiling and roof - flat ceiling / pitched roof	ceiling: 4 (up), roof: foil/sarking	unventilated; dark (solar absorptance > 0.70)

Note	• Insulation specified in this Certificate must be installed in accordance with Part 3.12.1.1 of the Building Code of Australia.
Note	• In some climate zones, insulation should be installed with due consideration of condensation and associated interaction with adjoining building materials.

Thermal Comfort Commitments	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
Windows, glazed doors and skylights			
The applicant must install the windows, glazed doors and shading devices described in the table below, in accordance with the specifications listed in the table. Relevant overshadowing specifications must be satisfied for each window and glazed door.	✓	✓	✓
The dwelling may have 1 skylight (<0.7 square metres) which is not listed in the table.	✓	✓	✓
<p>The following requirements must also be satisfied in relation to each window and glazed door:</p> <ul style="list-style-type: none"> For the following glass and frame types, the certifier check can be performed by visual inspection. <ul style="list-style-type: none"> - Aluminium single clear - Aluminium double (air) clear - Timber/uPVC/fibreglass single clear - Timber/uPVC/fibreglass double (air) clear 	✓	✓	✓ ✓

Window/glazed door no.	Maximum height (mm)	Maximum width (mm)	Type	Shading Device (Dimension within 10%)	Overshadowing
North-East facing					
Family	1800	800	aluminium, single, clear	none	not overshadowed
Family	1800	800	aluminium, single, clear	none	not overshadowed
Dining	2100	1800	aluminium, single, clear	solid overhang 3000 mm, 150 mm above head of window or glazed door	not overshadowed
Bath	1200	1400	aluminium, single, clear	eave 560 mm, 0 mm above head of window or glazed door	not overshadowed
Hall	1800	600	aluminium, single, clear	eave 560 mm, 0 mm above head of window or glazed door	not overshadowed
Stairs	600	1800	aluminium, single, clear	eave 560 mm, 0 mm above head of window or glazed door	not overshadowed
South-East facing					


Window/glazed door no.	Maximum height (mm)	Maximum width (mm)	Type	Shading Device (Dimension within 10%)	Overshadowing
Family	2100	2600	aluminium, single, clear	solid overhang 2505 mm, 150 mm above head of window or glazed door	not overshadowed
Dining	1800	2700	aluminium, single, clear	eave 560 mm, 0 mm above head of window or glazed door	not overshadowed
Bed 4	1000	1800	aluminium, single, clear	eave 560 mm, 0 mm above head of window or glazed door	not overshadowed
Bed 3	1000	1800	aluminium, single, clear	eave 560 mm, 0 mm above head of window or glazed door	not overshadowed
South-West facing					
Bed 2	1800	800	aluminium, single, clear	eave 560 mm, 0 mm above head of window or glazed door	not overshadowed
Ens	1500	600	aluminium, single, clear	eave 560 mm, 0 mm above head of window or glazed door	not overshadowed
North-West facing					
Entry	2400	1050	aluminium, single, clear	solid overhang 1630 mm, 0 mm above head of window or glazed door	not overshadowed
Master	1800	600	aluminium, single, clear	eave 560 mm, 0 mm above head of window or glazed door	not overshadowed
Master	1800	1800	aluminium, single, clear	eave 560 mm, 0 mm above head of window or glazed door	not overshadowed
Master	1800	600	aluminium, single, clear	eave 560 mm, 0 mm above head of window or glazed door	not overshadowed
WIR	1500	1200	aluminium, single, clear	eave 560 mm, 0 mm above head of window or glazed door	not overshadowed


Energy Commitments	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
Hot water			
The applicant must install the following hot water system in the development, or a system with a higher energy rating: gas instantaneous with a performance of 6 stars.	✓	✓	✓
Cooling system			
The applicant must install the following cooling system, or a system with a higher energy rating, in at least 1 living area: 1-phase airconditioning; Energy rating: EER 3.0 - 3.5		✓	✓
The applicant must install the following cooling system, or a system with a higher energy rating, in at least 1 bedroom: 1-phase airconditioning; Energy rating: EER 3.0 - 3.5		✓	✓
Heating system			
The applicant must install the following heating system, or a system with a higher energy rating, in at least 1 living area: 1-phase airconditioning; Energy rating: EER 3.5 - 4.0		✓	✓
The applicant must install the following heating system, or a system with a higher energy rating, in at least 1 bedroom: 1-phase airconditioning; Energy rating: EER 3.5 - 4.0		✓	✓
Ventilation			
The applicant must install the following exhaust systems in the development:			
At least 1 Bathroom: individual fan, ducted to façade or roof; Operation control: manual switch on/off		✓	✓
Kitchen: individual fan, ducted to façade or roof; Operation control: manual switch on/off		✓	✓
Laundry: natural ventilation only, or no laundry; Operation control: n/a		✓	✓
Artificial lighting			
The applicant must ensure that the "primary type of artificial lighting" is fluorescent or light emitting diode (LED) lighting in each of the following rooms, and where the word "dedicated" appears, the fittings for those lights must only be capable of accepting fluorescent or light emitting diode (LED) lamps:			
• at least 4 of the bedrooms / study; dedicated		✓	✓
• at least 2 of the living / dining rooms; dedicated		✓	✓
• the kitchen; dedicated		✓	✓


Energy Commitments	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
<ul style="list-style-type: none"> all bathrooms/toilets; dedicated 		✓	✓
<ul style="list-style-type: none"> the laundry; dedicated 		✓	✓
<ul style="list-style-type: none"> all hallways; dedicated 		✓	✓
Natural lighting			
The applicant must install a window and/or skylight in 2 bathroom(s)/toilet(s) in the development for natural lighting.	✓	✓	✓
Other			
The applicant must install a gas cooktop & electric oven in the kitchen of the dwelling.		✓	
The applicant must construct each refrigerator space in the development so that it is "well ventilated", as defined in the BASIX definitions.		✓	
The applicant must install a fixed outdoor clothes drying line as part of the development.		✓	

Legend

In these commitments, "applicant" means the person carrying out the development.

Commitments identified with a  in the "Show on DA plans" column must be shown on the plans accompanying the development application for the proposed development (if a development application is to be lodged for the proposed development).

Commitments identified with a  in the "Show on CC/CDC plans and specs" column must be shown in the plans and specifications accompanying the application for a construction certificate / complying development certificate for the proposed development.

Commitments identified with a  in the "Certifier check" column must be certified by a certifying authority as having been fulfilled, before a final occupation certificate (either interim or final) for the development may be issued.

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Single Dwelling

Certificate number: 1034927S




This certificate confirms that the proposed development will meet the NSW government's requirements for sustainability, if it is built in accordance with the commitments set out below. Terms used in this certificate, or in the commitments, have the meaning given by the document entitled "BASIX Definitions" dated 06/10/2017 published by the Department. This document is available at www.basix.nsw.gov.au

Secretary

Date of issue: Wednesday, 07 August 2019

To be valid, this certificate must be lodged within 3 months of the date of issue.



Project summary		
Project name	192120.02	
Street address	Lot 3334 Proposed Road 028 Road Jordan Springs 2747	
Local Government Area	Penrith City Council	
Plan type and plan number	deposited -	
Lot no.	3334	
Section no.	-	
Project type	separate dwelling house	
No. of bedrooms	4	
Project score		
Water	 42	Target 40
Thermal Comfort	 Pass	Target Pass
Energy	 50	Target 50

Certificate Prepared by
Name / Company Name: Accelerate Sustainability Assessments
ABN (if applicable): 81625027778

Description of project

Project address

Project name	192120.02
Street address	Lot 3334 Proposed Road 028 Road Jordan Springs 2747
Local Government Area	Penrith City Council
Plan type and plan number	Deposited Plan -
Lot no.	3334
Section no.	-

Project type

Project type	separate dwelling house
No. of bedrooms	4

Site details

Site area (m²)	278
Roof area (m²)	160
Conditioned floor area (m2)	159.4
Unconditioned floor area (m2)	12.32
Total area of garden and lawn (m2)	112

Assessor details and thermal loads

Assessor number	n/a
Certificate number	n/a
Climate zone	n/a
Area adjusted cooling load (MJ/m².year)	n/a
Area adjusted heating load (MJ/m².year)	n/a

Project score

Water	✓ 42	Target 40
Thermal Comfort	✓ Pass	Target Pass
Energy	✓ 50	Target 50

Schedule of BASIX commitments

The commitments set out below regulate how the proposed development is to be carried out. It is a condition of any development consent granted, or complying development certificate issued, for the proposed development, that BASIX commitments be complied with.

Water Commitments	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
Fixtures			
The applicant must install showerheads with a minimum rating of 3 star (> 7.5 but <= 9 L/min) in all showers in the development.		✓	✓
The applicant must install a toilet flushing system with a minimum rating of 4 star in each toilet in the development.		✓	✓
The applicant must install taps with a minimum rating of 3 star in the kitchen in the development.		✓	
The applicant must install basin taps with a minimum rating of 5 star in each bathroom in the development.		✓	
Alternative water			
Rainwater tank			
The applicant must install a rainwater tank of at least 2500 litres on the site. This rainwater tank must meet, and be installed in accordance with, the requirements of all applicable regulatory authorities.	✓	✓	✓
The applicant must configure the rainwater tank to collect rain runoff from at least 159.8 square metres of the roof area of the development (excluding the area of the roof which drains to any stormwater tank or private dam).		✓	✓
The applicant must connect the rainwater tank to: <ul style="list-style-type: none"> all toilets in the development the cold water tap that supplies each clothes washer in the development at least one outdoor tap in the development (Note: NSW Health does not recommend that rainwater be used for human consumption in areas with potable water supply.) 		✓ ✓ ✓	✓ ✓ ✓

Thermal Comfort Commitments	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
General features			
The dwelling must not have more than 2 storeys.	✓	✓	✓
The conditioned floor area of the dwelling must not exceed 300 square metres.	✓	✓	✓
The dwelling must not contain open mezzanine area exceeding 25 square metres.	✓	✓	✓
The dwelling must not contain third level habitable attic room.	✓	✓	✓
Floor, walls and ceiling/roof			
The applicant must construct the floor(s), walls, and ceiling/roof of the dwelling in accordance with the specifications listed in the table below.	✓	✓	✓

Construction	Additional insulation required (R-Value)	Other specifications
floor - concrete slab on ground, 75 square metres	nil	
floor - above habitable rooms or mezzanine, 8 square metres, framed	nil	
floor - suspended floor above garage, framed	0.3 (or 1 including construction) (down)	
external wall - brick veneer	2.06 (or 2.60 including construction)	
external wall - framed (weatherboard, fibre cement, metal clad)	2.20 (or 2.60 including construction)	
internal wall shared with garage - plasterboard	nil	
ceiling and roof - flat ceiling / pitched roof	ceiling: 4 (up), roof: foil/sarking	unventilated; dark (solar absorptance > 0.70)

Note	• Insulation specified in this Certificate must be installed in accordance with Part 3.12.1.1 of the Building Code of Australia.
Note	• In some climate zones, insulation should be installed with due consideration of condensation and associated interaction with adjoining building materials.

Thermal Comfort Commitments	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
Windows, glazed doors and skylights			
The applicant must install the windows, glazed doors and shading devices described in the table below, in accordance with the specifications listed in the table. Relevant overshadowing specifications must be satisfied for each window and glazed door.	✓	✓	✓
The dwelling may have 1 skylight (<0.7 square metres) which is not listed in the table.	✓	✓	✓
<p>The following requirements must also be satisfied in relation to each window and glazed door:</p> <ul style="list-style-type: none"> For the following glass and frame types, the certifier check can be performed by visual inspection. <ul style="list-style-type: none"> - Aluminium single clear - Aluminium double (air) clear - Timber/uPVC/fibreglass single clear - Timber/uPVC/fibreglass double (air) clear 	✓	✓	✓ ✓

Window/glazed door no.	Maximum height (mm)	Maximum width (mm)	Type	Shading Device (Dimension within 10%)	Overshadowing
North-East facing					
Bed 2	1800	800	aluminium, single, clear	eave 560 mm, 0 mm above head of window or glazed door	not overshadowed
Ens	1500	600	aluminium, single, clear	eave 560 mm, 0 mm above head of window or glazed door	not overshadowed
South-East facing					
Bed 3	1000	1800	aluminium, single, clear	eave 560 mm, 0 mm above head of window or glazed door	not overshadowed
Dining	1800	2700	aluminium, single, clear	eave 560 mm, 100 mm above head of window or glazed door	not overshadowed
Family	2100	2600	aluminium, single, clear	solid overhang 2505 mm, 150 mm above head of window or glazed door	not overshadowed
Bed 4	1000	1800	aluminium, single, clear	eave 560 mm, 0 mm above head of window or glazed door	not overshadowed


Window/glazed door no.	Maximum height (mm)	Maximum width (mm)	Type	Shading Device (Dimension within 10%)	Overshadowing
South-West facing					
Bath	1200	1400	aluminium, single, clear	eave 560 mm, 0 mm above head of window or glazed door	not overshadowed
Family	1800	800	aluminium, single, clear	none	not overshadowed
Stairs	600	1800	aluminium, single, clear	eave 560 mm, 0 mm above head of window or glazed door	not overshadowed
Hall	1800	600	aluminium, single, clear	eave 560 mm, 0 mm above head of window or glazed door	not overshadowed
Dining	2100	1800	aluminium, single, clear	solid overhang 3450 mm, 150 mm above head of window or glazed door	not overshadowed
Family	1800	800	aluminium, single, clear	none	not overshadowed
North-West facing					
Master	1800	1400	aluminium, single, clear	eave 560 mm, 0 mm above head of window or glazed door	not overshadowed
Master	1800	700	aluminium, single, clear	eave 560 mm, 0 mm above head of window or glazed door	not overshadowed
Entry	2400	650	aluminium, single, clear	solid overhang 1980 mm, 0 mm above head of window or glazed door	not overshadowed
Master	1800	700	aluminium, single, clear	eave 560 mm, 0 mm above head of window or glazed door	not overshadowed
WIR	1500	1400	aluminium, single, clear	eave 560 mm, 0 mm above head of window or glazed door	not overshadowed


Energy Commitments	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
Hot water			
The applicant must install the following hot water system in the development, or a system with a higher energy rating: gas instantaneous with a performance of 6 stars.	✓	✓	✓
Cooling system			
The applicant must install the following cooling system, or a system with a higher energy rating, in at least 1 living area: 1-phase airconditioning; Energy rating: EER 3.0 - 3.5		✓	✓
The applicant must install the following cooling system, or a system with a higher energy rating, in at least 1 bedroom: 1-phase airconditioning; Energy rating: EER 3.0 - 3.5		✓	✓
Heating system			
The applicant must install the following heating system, or a system with a higher energy rating, in at least 1 living area: 1-phase airconditioning; Energy rating: EER 3.5 - 4.0		✓	✓
The applicant must install the following heating system, or a system with a higher energy rating, in at least 1 bedroom: 1-phase airconditioning; Energy rating: EER 3.5 - 4.0		✓	✓
Ventilation			
The applicant must install the following exhaust systems in the development:			
At least 1 Bathroom: individual fan, ducted to façade or roof; Operation control: manual switch on/off		✓	✓
Kitchen: individual fan, ducted to façade or roof; Operation control: manual switch on/off		✓	✓
Laundry: natural ventilation only, or no laundry; Operation control: n/a		✓	✓
Artificial lighting			
The applicant must ensure that the "primary type of artificial lighting" is fluorescent or light emitting diode (LED) lighting in each of the following rooms, and where the word "dedicated" appears, the fittings for those lights must only be capable of accepting fluorescent or light emitting diode (LED) lamps:			
• at least 4 of the bedrooms / study; dedicated		✓	✓
• at least 2 of the living / dining rooms; dedicated		✓	✓
• the kitchen; dedicated		✓	✓


Energy Commitments	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
<ul style="list-style-type: none"> all bathrooms/toilets; dedicated 		✓	✓
<ul style="list-style-type: none"> the laundry; dedicated 		✓	✓
<ul style="list-style-type: none"> all hallways; dedicated 		✓	✓
Natural lighting			
The applicant must install a window and/or skylight in 2 bathroom(s)/toilet(s) in the development for natural lighting.	✓	✓	✓
Other			
The applicant must install a gas cooktop & electric oven in the kitchen of the dwelling.		✓	
The applicant must construct each refrigerator space in the development so that it is "well ventilated", as defined in the BASIX definitions.		✓	
The applicant must install a fixed outdoor clothes drying line as part of the development.		✓	

Legend

In these commitments, "applicant" means the person carrying out the development.

Commitments identified with a  in the "Show on DA plans" column must be shown on the plans accompanying the development application for the proposed development (if a development application is to be lodged for the proposed development).

Commitments identified with a  in the "Show on CC/CDC plans and specs" column must be shown in the plans and specifications accompanying the application for a construction certificate / complying development certificate for the proposed development.

Commitments identified with a  in the "Certifier check" column must be certified by a certifying authority as having been fulfilled, before a final occupation certificate (either interim or final) for the development may be issued.

BASIX[®]Certificate

Building Sustainability Index www.basix.nsw.gov.au

Single Dwelling

Certificate number: 1034923S




This certificate confirms that the proposed development will meet the NSW government's requirements for sustainability, if it is built in accordance with the commitments set out below. Terms used in this certificate, or in the commitments, have the meaning given by the document entitled "BASIX Definitions" dated 06/10/2017 published by the Department. This document is available at www.basix.nsw.gov.au

Secretary

Date of issue: Thursday, 08 August 2019

To be valid, this certificate must be lodged within 3 months of the date of issue.



Project summary		
Project name	192120.03	
Street address	Lot 3335 Proposed Road 028 Road Jordan Springs 2747	
Local Government Area	Penrith City Council	
Plan type and plan number	deposited -	
Lot no.	3335	
Section no.	-	
Project type	separate dwelling house	
No. of bedrooms	4	
Project score		
Water	 41	Target 40
Thermal Comfort	 Pass	Target Pass
Energy	 51	Target 50

Certificate Prepared by
Name / Company Name: Accelerate Sustainability Assessments
ABN (if applicable): 81625027778

Description of project

Project address

Project name	192120.03
Street address	Lot 3335 Proposed Road 028 Road Jordan Springs 2747
Local Government Area	Penrith City Council
Plan type and plan number	Deposited Plan -
Lot no.	3335
Section no.	-

Project type

Project type	separate dwelling house
No. of bedrooms	4

Site details

Site area (m²)	267
Roof area (m²)	160
Conditioned floor area (m2)	159.4
Unconditioned floor area (m2)	12.32
Total area of garden and lawn (m2)	108

Assessor details and thermal loads

Assessor number	n/a
Certificate number	n/a
Climate zone	n/a
Area adjusted cooling load (MJ/m².year)	n/a
Area adjusted heating load (MJ/m².year)	n/a

Project score

Water	✓ 41	Target 40
Thermal Comfort	✓ Pass	Target Pass
Energy	✓ 51	Target 50

Schedule of BASIX commitments

The commitments set out below regulate how the proposed development is to be carried out. It is a condition of any development consent granted, or complying development certificate issued, for the proposed development, that BASIX commitments be complied with.

Water Commitments	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
Fixtures			
The applicant must install showerheads with a minimum rating of 3 star (> 7.5 but <= 9 L/min) in all showers in the development.		✓	✓
The applicant must install a toilet flushing system with a minimum rating of 4 star in each toilet in the development.		✓	✓
The applicant must install taps with a minimum rating of 3 star in the kitchen in the development.		✓	
The applicant must install basin taps with a minimum rating of 5 star in each bathroom in the development.		✓	
Alternative water			
Rainwater tank			
The applicant must install a rainwater tank of at least 2000 litres on the site. This rainwater tank must meet, and be installed in accordance with, the requirements of all applicable regulatory authorities.	✓	✓	✓
The applicant must configure the rainwater tank to collect rain runoff from at least 159.8 square metres of the roof area of the development (excluding the area of the roof which drains to any stormwater tank or private dam).		✓	✓
The applicant must connect the rainwater tank to: <ul style="list-style-type: none"> all toilets in the development the cold water tap that supplies each clothes washer in the development at least one outdoor tap in the development (Note: NSW Health does not recommend that rainwater be used for human consumption in areas with potable water supply.) 		✓ ✓ ✓	✓ ✓ ✓

Thermal Comfort Commitments	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
General features			
The dwelling must not have more than 2 storeys.	✓	✓	✓
The conditioned floor area of the dwelling must not exceed 300 square metres.	✓	✓	✓
The dwelling must not contain open mezzanine area exceeding 25 square metres.	✓	✓	✓
The dwelling must not contain third level habitable attic room.	✓	✓	✓
Floor, walls and ceiling/roof			
The applicant must construct the floor(s), walls, and ceiling/roof of the dwelling in accordance with the specifications listed in the table below.	✓	✓	✓

Construction	Additional insulation required (R-Value)	Other specifications
floor - concrete slab on ground, 75 square metres	nil	
floor - above habitable rooms or mezzanine, 8 square metres, framed	nil	
floor - suspended floor above garage, framed	0.3 (or 1 including construction) (down)	
external wall - brick veneer	2.06 (or 2.60 including construction)	
external wall - framed (weatherboard, fibre cement, metal clad)	2.20 (or 2.60 including construction)	
internal wall shared with garage - plasterboard	nil	
ceiling and roof - flat ceiling / pitched roof	ceiling: 4 (up), roof: foil/sarking	unventilated; dark (solar absorptance > 0.70)

Note	• Insulation specified in this Certificate must be installed in accordance with Part 3.12.1.1 of the Building Code of Australia.
Note	• In some climate zones, insulation should be installed with due consideration of condensation and associated interaction with adjoining building materials.

Thermal Comfort Commitments	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
Windows, glazed doors and skylights			
The applicant must install the windows, glazed doors and shading devices described in the table below, in accordance with the specifications listed in the table. Relevant overshadowing specifications must be satisfied for each window and glazed door.	✓	✓	✓
The dwelling may have 1 skylight (<0.7 square metres) which is not listed in the table.	✓	✓	✓
<p>The following requirements must also be satisfied in relation to each window and glazed door:</p> <ul style="list-style-type: none"> For the following glass and frame types, the certifier check can be performed by visual inspection. <ul style="list-style-type: none"> - Aluminium single clear - Aluminium double (air) clear - Timber/uPVC/fibreglass single clear - Timber/uPVC/fibreglass double (air) clear 	✓	✓	✓ ✓

Window/glazed door no.	Maximum height (mm)	Maximum width (mm)	Type	Shading Device (Dimension within 10%)	Overshadowing
North-East facing					
Dining	2100	1800	aluminium, single, clear	solid overhang 3000 mm, 150 mm above head of window or glazed door	not overshadowed
Family	1800	800	aluminium, single, clear	none	not overshadowed
Hall	1800	600	aluminium, single, clear	eave 560 mm, 0 mm above head of window or glazed door	not overshadowed
Bath	1200	1400	aluminium, single, clear	eave 560 mm, 0 mm above head of window or glazed door	not overshadowed
Stairs	600	1800	aluminium, single, clear	eave 560 mm, 0 mm above head of window or glazed door	not overshadowed
Family	1800	800	aluminium, single, clear	none	not overshadowed
South-East facing					


Window/glazed door no.	Maximum height (mm)	Maximum width (mm)	Type	Shading Device (Dimension within 10%)	Overshadowing
Bed 3	1000	1800	aluminium, single, clear	eave 560 mm, 0 mm above head of window or glazed door	not overshadowed
Bed 4	1000	1800	aluminium, single, clear	eave 560 mm, 0 mm above head of window or glazed door	not overshadowed
Family	2100	2600	aluminium, single, clear	solid overhang 2505 mm, 150 mm above head of window or glazed door	not overshadowed
Dining	1800	2700	aluminium, single, clear	eave 560 mm, 0 mm above head of window or glazed door	not overshadowed
South-West facing					
Ens	1500	600	aluminium, single, clear	eave 560 mm, 0 mm above head of window or glazed door	not overshadowed
Bed 2	1800	800	aluminium, single, clear	eave 560 mm, 0 mm above head of window or glazed door	not overshadowed
North-West facing					
WIR	1500	1200	aluminium, single, clear	eave 560 mm, 0 mm above head of window or glazed door	not overshadowed
Master	1800	600	aluminium, single, clear	eave 560 mm, 0 mm above head of window or glazed door	not overshadowed
Master	1800	1800	aluminium, single, clear	eave 560 mm, 0 mm above head of window or glazed door	not overshadowed
Entry	2400	1050	aluminium, single, clear	solid overhang 1630 mm, 0 mm above head of window or glazed door	not overshadowed
Master	1800	600	aluminium, single, clear	eave 560 mm, 0 mm above head of window or glazed door	not overshadowed


Energy Commitments	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
Hot water			
The applicant must install the following hot water system in the development, or a system with a higher energy rating: gas instantaneous with a performance of 6 stars.	✓	✓	✓
Cooling system			
The applicant must install the following cooling system, or a system with a higher energy rating, in at least 1 living area: 1-phase airconditioning; Energy rating: EER 3.0 - 3.5		✓	✓
The applicant must install the following cooling system, or a system with a higher energy rating, in at least 1 bedroom: 1-phase airconditioning; Energy rating: EER 3.0 - 3.5		✓	✓
Heating system			
The applicant must install the following heating system, or a system with a higher energy rating, in at least 1 living area: 1-phase airconditioning; Energy rating: EER 3.5 - 4.0		✓	✓
The applicant must install the following heating system, or a system with a higher energy rating, in at least 1 bedroom: 1-phase airconditioning; Energy rating: EER 3.5 - 4.0		✓	✓
Ventilation			
The applicant must install the following exhaust systems in the development:			
At least 1 Bathroom: individual fan, ducted to façade or roof; Operation control: manual switch on/off		✓	✓
Kitchen: individual fan, ducted to façade or roof; Operation control: manual switch on/off		✓	✓
Laundry: natural ventilation only, or no laundry; Operation control: n/a		✓	✓
Artificial lighting			
The applicant must ensure that the "primary type of artificial lighting" is fluorescent or light emitting diode (LED) lighting in each of the following rooms, and where the word "dedicated" appears, the fittings for those lights must only be capable of accepting fluorescent or light emitting diode (LED) lamps:			
• at least 4 of the bedrooms / study; dedicated		✓	✓
• at least 2 of the living / dining rooms; dedicated		✓	✓
• the kitchen; dedicated		✓	✓


Energy Commitments	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
<ul style="list-style-type: none"> all bathrooms/toilets; dedicated 		✓	✓
<ul style="list-style-type: none"> the laundry; dedicated 		✓	✓
<ul style="list-style-type: none"> all hallways; dedicated 		✓	✓
Natural lighting			
The applicant must install a window and/or skylight in 2 bathroom(s)/toilet(s) in the development for natural lighting.	✓	✓	✓
Other			
The applicant must install a gas cooktop & electric oven in the kitchen of the dwelling.		✓	
The applicant must construct each refrigerator space in the development so that it is "well ventilated", as defined in the BASIX definitions.		✓	
The applicant must install a fixed outdoor clothes drying line as part of the development.		✓	

Legend

In these commitments, "applicant" means the person carrying out the development.

Commitments identified with a  in the "Show on DA plans" column must be shown on the plans accompanying the development application for the proposed development (if a development application is to be lodged for the proposed development).

Commitments identified with a  in the "Show on CC/CDC plans and specs" column must be shown in the plans and specifications accompanying the application for a construction certificate / complying development certificate for the proposed development.

Commitments identified with a  in the "Certifier check" column must be certified by a certifying authority as having been fulfilled, before a final occupation certificate (either interim or final) for the development may be issued.

BASIX[®]Certificate

Building Sustainability Index www.basix.nsw.gov.au

Single Dwelling

Certificate number: 1035015S




This certificate confirms that the proposed development will meet the NSW government's requirements for sustainability, if it is built in accordance with the commitments set out below. Terms used in this certificate, or in the commitments, have the meaning given by the document entitled "BASIX Definitions" dated 06/10/2017 published by the Department. This document is available at www.basix.nsw.gov.au

Secretary

Date of issue: Thursday, 08 August 2019

To be valid, this certificate must be lodged within 3 months of the date of issue.



Project summary		
Project name	192120.04	
Street address	Lot 3336 Proposed Road 028 Road Jordan Springs 2747	
Local Government Area	Penrith City Council	
Plan type and plan number	deposited -	
Lot no.	3336	
Section no.	-	
Project type	separate dwelling house	
No. of bedrooms	4	
Project score		
Water	 42	Target 40
Thermal Comfort	 Pass	Target Pass
Energy	 50	Target 50

Certificate Prepared by

Name / Company Name: Accelerate Sustainability Assessments

ABN (if applicable): 81625027778

Description of project

Project address

Project name	192120.04
Street address	Lot 3336 Proposed Road 028 Road Jordan Springs 2747
Local Government Area	Penrith City Council
Plan type and plan number	Deposited Plan -
Lot no.	3336
Section no.	-

Project type

Project type	separate dwelling house
No. of bedrooms	4

Site details

Site area (m²)	257
Roof area (m²)	160
Conditioned floor area (m2)	159.4
Unconditioned floor area (m2)	12.32
Total area of garden and lawn (m2)	95

Assessor details and thermal loads

Assessor number	n/a
Certificate number	n/a
Climate zone	n/a
Area adjusted cooling load (MJ/m².year)	n/a
Area adjusted heating load (MJ/m².year)	n/a

Project score

Water	✓ 42	Target 40
Thermal Comfort	✓ Pass	Target Pass
Energy	✓ 50	Target 50

Schedule of BASIX commitments

The commitments set out below regulate how the proposed development is to be carried out. It is a condition of any development consent granted, or complying development certificate issued, for the proposed development, that BASIX commitments be complied with.

Water Commitments	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
Fixtures			
The applicant must install showerheads with a minimum rating of 3 star (> 7.5 but <= 9 L/min) in all showers in the development.		✓	✓
The applicant must install a toilet flushing system with a minimum rating of 4 star in each toilet in the development.		✓	✓
The applicant must install taps with a minimum rating of 3 star in the kitchen in the development.		✓	
The applicant must install basin taps with a minimum rating of 5 star in each bathroom in the development.		✓	
Alternative water			
Rainwater tank			
The applicant must install a rainwater tank of at least 2500 litres on the site. This rainwater tank must meet, and be installed in accordance with, the requirements of all applicable regulatory authorities.	✓	✓	✓
The applicant must configure the rainwater tank to collect rain runoff from at least 159.8 square metres of the roof area of the development (excluding the area of the roof which drains to any stormwater tank or private dam).		✓	✓
The applicant must connect the rainwater tank to: <ul style="list-style-type: none"> all toilets in the development the cold water tap that supplies each clothes washer in the development at least one outdoor tap in the development (Note: NSW Health does not recommend that rainwater be used for human consumption in areas with potable water supply.) 		✓ ✓ ✓	✓ ✓ ✓

Thermal Comfort Commitments	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
General features			
The dwelling must not have more than 2 storeys.	✓	✓	✓
The conditioned floor area of the dwelling must not exceed 300 square metres.	✓	✓	✓
The dwelling must not contain open mezzanine area exceeding 25 square metres.	✓	✓	✓
The dwelling must not contain third level habitable attic room.	✓	✓	✓
Floor, walls and ceiling/roof			
The applicant must construct the floor(s), walls, and ceiling/roof of the dwelling in accordance with the specifications listed in the table below.	✓	✓	✓

Construction	Additional insulation required (R-Value)	Other specifications
floor - concrete slab on ground, 75 square metres	nil	
floor - above habitable rooms or mezzanine, 8 square metres, framed	nil	
floor - suspended floor above garage, framed	0.3 (or 1 including construction) (down)	
external wall - brick veneer	2.06 (or 2.60 including construction)	
external wall - framed (weatherboard, fibre cement, metal clad)	2.20 (or 2.60 including construction)	
internal wall shared with garage - plasterboard	nil	
ceiling and roof - flat ceiling / pitched roof	ceiling: 4 (up), roof: foil/sarking	unventilated; dark (solar absorptance > 0.70)

Note	• Insulation specified in this Certificate must be installed in accordance with Part 3.12.1.1 of the Building Code of Australia.
Note	• In some climate zones, insulation should be installed with due consideration of condensation and associated interaction with adjoining building materials.

Thermal Comfort Commitments	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
Windows, glazed doors and skylights			
The applicant must install the windows, glazed doors and shading devices described in the table below, in accordance with the specifications listed in the table. Relevant overshadowing specifications must be satisfied for each window and glazed door.	✓	✓	✓
The dwelling may have 1 skylight (<0.7 square metres) which is not listed in the table.	✓	✓	✓
<p>The following requirements must also be satisfied in relation to each window and glazed door:</p> <ul style="list-style-type: none"> For the following glass and frame types, the certifier check can be performed by visual inspection. <ul style="list-style-type: none"> - Aluminium single clear - Aluminium double (air) clear - Timber/uPVC/fibreglass single clear - Timber/uPVC/fibreglass double (air) clear 	✓	✓	✓ ✓

Window/glazed door no.	Maximum height (mm)	Maximum width (mm)	Type	Shading Device (Dimension within 10%)	Overshadowing
North-East facing					
Bed 2	1800	800	aluminium, single, clear	eave 560 mm, 0 mm above head of window or glazed door	not overshadowed
Ens	1500	600	aluminium, single, clear	eave 560 mm, 0 mm above head of window or glazed door	not overshadowed
South-East facing					
Family	2100	2600	aluminium, single, clear	solid overhang 2505 mm, 150 mm above head of window or glazed door	not overshadowed
Bed 3	1000	1800	aluminium, single, clear	eave 560 mm, 0 mm above head of window or glazed door	not overshadowed
Dining	1800	2700	aluminium, single, clear	eave 560 mm, 100 mm above head of window or glazed door	not overshadowed
Bed 4	1000	1800	aluminium, single, clear	eave 560 mm, 0 mm above head of window or glazed door	not overshadowed


Window/glazed door no.	Maximum height (mm)	Maximum width (mm)	Type	Shading Device (Dimension within 10%)	Overshadowing
South-West facing					
Family	1800	800	aluminium, single, clear	none	not overshadowed
Dining	2100	1800	aluminium, single, clear	solid overhang 3450 mm, 150 mm above head of window or glazed door	not overshadowed
Bath	1200	1400	aluminium, single, clear	eave 560 mm, 0 mm above head of window or glazed door	not overshadowed
Hall	1800	600	aluminium, single, clear	eave 560 mm, 0 mm above head of window or glazed door	not overshadowed
Family	1800	800	aluminium, single, clear	none	not overshadowed
Stairs	600	1800	aluminium, single, clear	eave 560 mm, 0 mm above head of window or glazed door	not overshadowed
North-West facing					
WIR	1500	1400	aluminium, single, clear	eave 560 mm, 0 mm above head of window or glazed door	not overshadowed
Master	1800	2700	aluminium, single, clear	eave 560 mm, 0 mm above head of window or glazed door	not overshadowed
Entry	2400	1050	aluminium, single, clear	solid overhang 1510 mm, 0 mm above head of window or glazed door	not overshadowed


Energy Commitments	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
Hot water			
The applicant must install the following hot water system in the development, or a system with a higher energy rating: gas instantaneous with a performance of 6 stars.	✓	✓	✓
Cooling system			
The applicant must install the following cooling system, or a system with a higher energy rating, in at least 1 living area: 1-phase airconditioning; Energy rating: EER 3.0 - 3.5		✓	✓
The applicant must install the following cooling system, or a system with a higher energy rating, in at least 1 bedroom: 1-phase airconditioning; Energy rating: EER 3.0 - 3.5		✓	✓
Heating system			
The applicant must install the following heating system, or a system with a higher energy rating, in at least 1 living area: 1-phase airconditioning; Energy rating: EER 3.5 - 4.0		✓	✓
The applicant must install the following heating system, or a system with a higher energy rating, in at least 1 bedroom: 1-phase airconditioning; Energy rating: EER 3.5 - 4.0		✓	✓
Ventilation			
The applicant must install the following exhaust systems in the development:			
At least 1 Bathroom: individual fan, ducted to façade or roof; Operation control: manual switch on/off		✓	✓
Kitchen: individual fan, ducted to façade or roof; Operation control: manual switch on/off		✓	✓
Laundry: natural ventilation only, or no laundry; Operation control: n/a		✓	✓
Artificial lighting			
The applicant must ensure that the "primary type of artificial lighting" is fluorescent or light emitting diode (LED) lighting in each of the following rooms, and where the word "dedicated" appears, the fittings for those lights must only be capable of accepting fluorescent or light emitting diode (LED) lamps:			
• at least 4 of the bedrooms / study; dedicated		✓	✓
• at least 2 of the living / dining rooms; dedicated		✓	✓
• the kitchen; dedicated		✓	✓


Energy Commitments	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
<ul style="list-style-type: none"> all bathrooms/toilets; dedicated 		✓	✓
<ul style="list-style-type: none"> the laundry; dedicated 		✓	✓
<ul style="list-style-type: none"> all hallways; dedicated 		✓	✓
Natural lighting			
The applicant must install a window and/or skylight in 2 bathroom(s)/toilet(s) in the development for natural lighting.	✓	✓	✓
Other			
The applicant must install a gas cooktop & electric oven in the kitchen of the dwelling.		✓	
The applicant must construct each refrigerator space in the development so that it is "well ventilated", as defined in the BASIX definitions.		✓	
The applicant must install a fixed outdoor clothes drying line as part of the development.		✓	

Legend

In these commitments, "applicant" means the person carrying out the development.

Commitments identified with a  in the "Show on DA plans" column must be shown on the plans accompanying the development application for the proposed development (if a development application is to be lodged for the proposed development).

Commitments identified with a  in the "Show on CC/CDC plans and specs" column must be shown in the plans and specifications accompanying the application for a construction certificate / complying development certificate for the proposed development.

Commitments identified with a  in the "Certifier check" column must be certified by a certifying authority as having been fulfilled, before a final occupation certificate (either interim or final) for the development may be issued.

BASIX[®]Certificate

Building Sustainability Index www.basix.nsw.gov.au

Single Dwelling

Certificate number: 1035041S




This certificate confirms that the proposed development will meet the NSW government's requirements for sustainability, if it is built in accordance with the commitments set out below. Terms used in this certificate, or in the commitments, have the meaning given by the document entitled "BASIX Definitions" dated 06/10/2017 published by the Department. This document is available at www.basix.nsw.gov.au

Secretary

Date of issue: Thursday, 08 August 2019

To be valid, this certificate must be lodged within 3 months of the date of issue.



Project summary		
Project name	192120.05	
Street address	Lot 3337 Proposed Road 028 Road Jordan Springs 2747	
Local Government Area	Penrith City Council	
Plan type and plan number	deposited -	
Lot no.	3337	
Section no.	-	
Project type	separate dwelling house	
No. of bedrooms	4	
Project score		
Water	 42	Target 40
Thermal Comfort	 Pass	Target Pass
Energy	 51	Target 50

Certificate Prepared by

Name / Company Name: Accelerate Sustainability Assessments

ABN (if applicable): 81625027778

Description of project

Project address

Project name	192120.05
Street address	Lot 3337 Proposed Road 028 Road Jordan Springs 2747
Local Government Area	Penrith City Council
Plan type and plan number	Deposited Plan -
Lot no.	3337
Section no.	-

Project type

Project type	separate dwelling house
No. of bedrooms	4




Site details

Site area (m²)	246
Roof area (m²)	160
Conditioned floor area (m2)	159.4
Unconditioned floor area (m2)	12.32
Total area of garden and lawn (m2)	87

Assessor details and thermal loads

Assessor number	n/a
Certificate number	n/a
Climate zone	n/a
Area adjusted cooling load (MJ/m².year)	n/a
Area adjusted heating load (MJ/m².year)	n/a

Project score

Water	 42	Target 40
Thermal Comfort	 Pass	Target Pass
Energy	 51	Target 50

Schedule of BASIX commitments

The commitments set out below regulate how the proposed development is to be carried out. It is a condition of any development consent granted, or complying development certificate issued, for the proposed development, that BASIX commitments be complied with.

Water Commitments	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
Fixtures			
The applicant must install showerheads with a minimum rating of 3 star (> 7.5 but <= 9 L/min) in all showers in the development.		✓	✓
The applicant must install a toilet flushing system with a minimum rating of 4 star in each toilet in the development.		✓	✓
The applicant must install taps with a minimum rating of 3 star in the kitchen in the development.		✓	
The applicant must install basin taps with a minimum rating of 5 star in each bathroom in the development.		✓	
Alternative water			
Rainwater tank			
The applicant must install a rainwater tank of at least 2000 litres on the site. This rainwater tank must meet, and be installed in accordance with, the requirements of all applicable regulatory authorities.	✓	✓	✓
The applicant must configure the rainwater tank to collect rain runoff from at least 159.8 square metres of the roof area of the development (excluding the area of the roof which drains to any stormwater tank or private dam).		✓	✓
The applicant must connect the rainwater tank to: <ul style="list-style-type: none"> all toilets in the development the cold water tap that supplies each clothes washer in the development at least one outdoor tap in the development (Note: NSW Health does not recommend that rainwater be used for human consumption in areas with potable water supply.) 		✓ ✓ ✓	✓ ✓ ✓

Thermal Comfort Commitments	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
General features			
The dwelling must not have more than 2 storeys.	✓	✓	✓
The conditioned floor area of the dwelling must not exceed 300 square metres.	✓	✓	✓
The dwelling must not contain open mezzanine area exceeding 25 square metres.	✓	✓	✓
The dwelling must not contain third level habitable attic room.	✓	✓	✓
Floor, walls and ceiling/roof			
The applicant must construct the floor(s), walls, and ceiling/roof of the dwelling in accordance with the specifications listed in the table below.	✓	✓	✓

Construction	Additional insulation required (R-Value)	Other specifications
floor - concrete slab on ground, 75 square metres	nil	
floor - above habitable rooms or mezzanine, 8 square metres, framed	nil	
floor - suspended floor above garage, framed	0.3 (or 1 including construction) (down)	
external wall - brick veneer	2.06 (or 2.60 including construction)	
external wall - framed (weatherboard, fibre cement, metal clad)	2.20 (or 2.60 including construction)	
internal wall shared with garage - plasterboard	nil	
ceiling and roof - flat ceiling / pitched roof	ceiling: 4 (up), roof: foil/sarking	unventilated; dark (solar absorptance > 0.70)

Note	• Insulation specified in this Certificate must be installed in accordance with Part 3.12.1.1 of the Building Code of Australia.
Note	• In some climate zones, insulation should be installed with due consideration of condensation and associated interaction with adjoining building materials.

Thermal Comfort Commitments	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
Windows, glazed doors and skylights			
The applicant must install the windows, glazed doors and shading devices described in the table below, in accordance with the specifications listed in the table. Relevant overshadowing specifications must be satisfied for each window and glazed door.	✓	✓	✓
The dwelling may have 1 skylight (<0.7 square metres) which is not listed in the table.	✓	✓	✓
<p>The following requirements must also be satisfied in relation to each window and glazed door:</p> <ul style="list-style-type: none"> For the following glass and frame types, the certifier check can be performed by visual inspection. <ul style="list-style-type: none"> Aluminium single clear Aluminium double (air) clear Timber/uPVC/fibreglass single clear Timber/uPVC/fibreglass double (air) clear 	✓	✓	✓ ✓

Window/glazed door no.	Maximum height (mm)	Maximum width (mm)	Type	Shading Device (Dimension within 10%)	Overshadowing
North-East facing					
Dining	2100	1800	aluminium, single, clear	solid overhang 3000 mm, 150 mm above head of window or glazed door	not overshadowed
Family	1800	800	aluminium, single, clear	none	not overshadowed
Hall	1800	600	aluminium, single, clear	eave 560 mm, 0 mm above head of window or glazed door	not overshadowed
Family	1800	800	aluminium, single, clear	none	not overshadowed
Bath	1200	1400	aluminium, single, clear	eave 560 mm, 0 mm above head of window or glazed door	not overshadowed
Stairs	600	1800	aluminium, single, clear	eave 560 mm, 0 mm above head of window or glazed door	not overshadowed
South-East facing					


Window/glazed door no.	Maximum height (mm)	Maximum width (mm)	Type	Shading Device (Dimension within 10%)	Overshadowing
Family	2100	2600	aluminium, single, clear	solid overhang 2505 mm, 150 mm above head of window or glazed door	not overshadowed
Bed 4	1200	1800	aluminium, single, clear	eave 560 mm, 0 mm above head of window or glazed door	not overshadowed
Bed 3	1200	1800	aluminium, single, clear	eave 560 mm, 0 mm above head of window or glazed door	not overshadowed
Dining	1800	2700	aluminium, single, clear	eave 560 mm, 0 mm above head of window or glazed door	not overshadowed
South-West facing					
Ens	1500	600	aluminium, single, clear	eave 560 mm, 0 mm above head of window or glazed door	not overshadowed
Bed 2	1800	800	aluminium, single, clear	eave 560 mm, 0 mm above head of window or glazed door	not overshadowed
North-West facing					
Entry	2400	650	aluminium, single, clear	solid overhang 1980 mm, 0 mm above head of window or glazed door	not overshadowed
Master	1800	700	aluminium, single, clear	eave 560 mm, 0 mm above head of window or glazed door	not overshadowed
Master	1800	700	aluminium, single, clear	eave 560 mm, 0 mm above head of window or glazed door	not overshadowed
Master	1800	1400	aluminium, single, clear	eave 560 mm, 0 mm above head of window or glazed door	not overshadowed
WIR	1500	1400	aluminium, single, clear	eave 560 mm, 0 mm above head of window or glazed door	not overshadowed


Energy Commitments	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
Hot water			
The applicant must install the following hot water system in the development, or a system with a higher energy rating: gas instantaneous with a performance of 6 stars.	✓	✓	✓
Cooling system			
The applicant must install the following cooling system, or a system with a higher energy rating, in at least 1 living area: 1-phase airconditioning; Energy rating: EER 3.0 - 3.5		✓	✓
The applicant must install the following cooling system, or a system with a higher energy rating, in at least 1 bedroom: 1-phase airconditioning; Energy rating: EER 3.0 - 3.5		✓	✓
Heating system			
The applicant must install the following heating system, or a system with a higher energy rating, in at least 1 living area: 1-phase airconditioning; Energy rating: EER 3.5 - 4.0		✓	✓
The applicant must install the following heating system, or a system with a higher energy rating, in at least 1 bedroom: 1-phase airconditioning; Energy rating: EER 3.5 - 4.0		✓	✓
Ventilation			
The applicant must install the following exhaust systems in the development:			
At least 1 Bathroom: individual fan, ducted to façade or roof; Operation control: manual switch on/off		✓	✓
Kitchen: individual fan, ducted to façade or roof; Operation control: manual switch on/off		✓	✓
Laundry: natural ventilation only, or no laundry; Operation control: n/a		✓	✓
Artificial lighting			
The applicant must ensure that the "primary type of artificial lighting" is fluorescent or light emitting diode (LED) lighting in each of the following rooms, and where the word "dedicated" appears, the fittings for those lights must only be capable of accepting fluorescent or light emitting diode (LED) lamps:			
• at least 4 of the bedrooms / study; dedicated		✓	✓
• at least 2 of the living / dining rooms; dedicated		✓	✓
• the kitchen; dedicated		✓	✓


Energy Commitments	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
<ul style="list-style-type: none"> all bathrooms/toilets; dedicated 		✓	✓
<ul style="list-style-type: none"> the laundry; dedicated 		✓	✓
<ul style="list-style-type: none"> all hallways; dedicated 		✓	✓
Natural lighting			
The applicant must install a window and/or skylight in 2 bathroom(s)/toilet(s) in the development for natural lighting.	✓	✓	✓
Other			
The applicant must install a gas cooktop & electric oven in the kitchen of the dwelling.		✓	
The applicant must construct each refrigerator space in the development so that it is "well ventilated", as defined in the BASIX definitions.		✓	
The applicant must install a fixed outdoor clothes drying line as part of the development.		✓	

Legend

In these commitments, "applicant" means the person carrying out the development.

Commitments identified with a  in the "Show on DA plans" column must be shown on the plans accompanying the development application for the proposed development (if a development application is to be lodged for the proposed development).

Commitments identified with a  in the "Show on CC/CDC plans and specs" column must be shown in the plans and specifications accompanying the application for a construction certificate / complying development certificate for the proposed development.

Commitments identified with a  in the "Certifier check" column must be certified by a certifying authority as having been fulfilled, before a final occupation certificate (either interim or final) for the development may be issued.

BASIX[®]Certificate

Building Sustainability Index www.basix.nsw.gov.au

Single Dwelling

Certificate number: 1035074S




This certificate confirms that the proposed development will meet the NSW government's requirements for sustainability, if it is built in accordance with the commitments set out below. Terms used in this certificate, or in the commitments, have the meaning given by the document entitled "BASIX Definitions" dated 06/10/2017 published by the Department. This document is available at www.basix.nsw.gov.au

Secretary

Date of issue: Thursday, 08 August 2019

To be valid, this certificate must be lodged within 3 months of the date of issue.



Project summary		
Project name	192120.06	
Street address	Lot 3339 Proposed Road 028 Road Jordan Springs 2747	
Local Government Area	Penrith City Council	
Plan type and plan number	deposited -	
Lot no.	3339	
Section no.	-	
Project type	separate dwelling house	
No. of bedrooms	4	
Project score		
Water	 40	Target 40
Thermal Comfort	 Pass	Target Pass
Energy	 50	Target 50

Certificate Prepared by

Name / Company Name: Accelerate Sustainability Assessments

ABN (if applicable): 81625027778

Description of project

Project address

Project name	192120.06
Street address	Lot 3339 Proposed Road 028 Road Jordan Springs 2747
Local Government Area	Penrith City Council
Plan type and plan number	Deposited Plan -
Lot no.	3339
Section no.	-

Project type

Project type	separate dwelling house
No. of bedrooms	4

Site details

Site area (m²)	310
Roof area (m²)	156
Conditioned floor area (m2)	203.4
Unconditioned floor area (m2)	13.3
Total area of garden and lawn (m2)	133

Assessor details and thermal loads

Assessor number	n/a
Certificate number	n/a
Climate zone	n/a
Area adjusted cooling load (MJ/m².year)	n/a
Area adjusted heating load (MJ/m².year)	n/a

Project score

Water	✓ 40	Target 40
Thermal Comfort	✓ Pass	Target Pass
Energy	✓ 50	Target 50

Schedule of BASIX commitments

The commitments set out below regulate how the proposed development is to be carried out. It is a condition of any development consent granted, or complying development certificate issued, for the proposed development, that BASIX commitments be complied with.

Water Commitments	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
Fixtures			
The applicant must install showerheads with a minimum rating of 3 star (> 7.5 but <= 9 L/min) in all showers in the development.		✓	✓
The applicant must install a toilet flushing system with a minimum rating of 4 star in each toilet in the development.		✓	✓
The applicant must install taps with a minimum rating of 3 star in the kitchen in the development.		✓	
The applicant must install basin taps with a minimum rating of 5 star in each bathroom in the development.		✓	
Alternative water			
Rainwater tank			
The applicant must install a rainwater tank of at least 2000 litres on the site. This rainwater tank must meet, and be installed in accordance with, the requirements of all applicable regulatory authorities.	✓	✓	✓
The applicant must configure the rainwater tank to collect rain runoff from at least 156.37 square metres of the roof area of the development (excluding the area of the roof which drains to any stormwater tank or private dam).		✓	✓
The applicant must connect the rainwater tank to: <ul style="list-style-type: none"> all toilets in the development the cold water tap that supplies each clothes washer in the development at least one outdoor tap in the development (Note: NSW Health does not recommend that rainwater be used for human consumption in areas with potable water supply.) 		✓ ✓ ✓	✓ ✓ ✓

Thermal Comfort Commitments	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
General features			
The dwelling must not have more than 2 storeys.	✓	✓	✓
The conditioned floor area of the dwelling must not exceed 300 square metres.	✓	✓	✓
The dwelling must not contain open mezzanine area exceeding 25 square metres.	✓	✓	✓
The dwelling must not contain third level habitable attic room.	✓	✓	✓
Floor, walls and ceiling/roof			
The applicant must construct the floor(s), walls, and ceiling/roof of the dwelling in accordance with the specifications listed in the table below.	✓	✓	✓

Construction	Additional insulation required (R-Value)	Other specifications
floor - concrete slab on ground, 100 square metres	nil	
floor - above habitable rooms or mezzanine, 86 square metres, framed	nil	
floor - suspended floor above garage, framed	0.3 (or 1 including construction) (down)	
external wall - brick veneer	2.06 (or 2.60 including construction)	
external wall - other/undecided	2.60 (including construction)	
internal wall shared with garage - plasterboard	nil	
ceiling and roof - flat ceiling / pitched roof	ceiling: 4 (up), roof: foil/sarking	2 wind-driven ventilator(s) + eave vents; dark (solar absorptance > 0.70)

Note	• Insulation specified in this Certificate must be installed in accordance with Part 3.12.1.1 of the Building Code of Australia.
Note	• In some climate zones, insulation should be installed with due consideration of condensation and associated interaction with adjoining building materials.

Thermal Comfort Commitments	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
Windows, glazed doors and skylights			
The applicant must install the windows, glazed doors and shading devices described in the table below, in accordance with the specifications listed in the table. Relevant overshadowing specifications must be satisfied for each window and glazed door.	✓	✓	✓
The dwelling may have 1 skylight (<0.7 square metres) which is not listed in the table.	✓	✓	✓
<p>The following requirements must also be satisfied in relation to each window and glazed door:</p> <ul style="list-style-type: none"> For the following glass and frame types, the certifier check can be performed by visual inspection. <ul style="list-style-type: none"> - Aluminium single clear - Aluminium double (air) clear - Timber/uPVC/fibreglass single clear - Timber/uPVC/fibreglass double (air) clear 	✓	✓	✓ ✓

Window/glazed door no.	Maximum height (mm)	Maximum width (mm)	Type	Shading Device (Dimension within 10%)	Overshadowing
North-East facing					
Theatre	1800	800	aluminium, single, clear	none	not overshadowed
Dining	1800	2100	aluminium, single, clear	none	not overshadowed
Living	2400	2600	aluminium, single, clear	solid overhang 2600 mm, 0 mm above head of window or glazed door	not overshadowed
Ens	1800	800	aluminium, single, clear	eave 550 mm, 0 mm above head of window or glazed door	not overshadowed
Bed 4	1800	1800	aluminium, single, clear	eave 550 mm, 0 mm above head of window or glazed door	not overshadowed
South-East facing					
Dining	1800	800	aluminium, single, clear	none	not overshadowed

Window/glazed door no.	Maximum height (mm)	Maximum width (mm)	Type	Shading Device (Dimension within 10%)	Overshadowing
Dining	2400	1800	aluminium, single, clear	solid overhang 3530 mm, 0 mm above head of window or glazed door	not overshadowed
Living	1800	2700	aluminium, single, clear	eave 550 mm, 0 mm above head of window or glazed door	not overshadowed
South-West facing					
Bed 3	1800	1800	aluminium, single, clear	eave 550 mm, 0 mm above head of window or glazed door	not overshadowed
Bath	1400	600	aluminium, single, clear	eave 550 mm, 0 mm above head of window or glazed door	not overshadowed
North-West facing					
Entry	2400	500	aluminium, single, clear	solid overhang 1570 mm, 0 mm above head of window or glazed door	not overshadowed
Entry	2400	500	aluminium, single, clear	solid overhang 1570 mm, 0 mm above head of window or glazed door	not overshadowed
Theatre	1800	1200	aluminium, single, clear	solid overhang 940 mm, 0 mm above head of window or glazed door	not overshadowed
Theatre	1800	600	aluminium, single, clear	none	not overshadowed
Bed 2	1800	600	aluminium, single, clear	eave 550 mm, 0 mm above head of window or glazed door	not overshadowed
Bed 2	1800	600	aluminium, single, clear	eave 550 mm, 0 mm above head of window or glazed door	not overshadowed
Bed 2	1800	600	aluminium, single, clear	eave 1420 mm, 0 mm above head of window or glazed door	not overshadowed
Master	1400	2700	aluminium, single, clear	eave 1420 mm, 0 mm above head of window or glazed door	not overshadowed
Master	1800	600	aluminium, single, clear	eave 550 mm, 0 mm above head of window or glazed door	not overshadowed

Energy Commitments	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
Hot water			
The applicant must install the following hot water system in the development, or a system with a higher energy rating: gas instantaneous with a performance of 6 stars.	✓	✓	✓
Cooling system			
The applicant must install the following cooling system, or a system with a higher energy rating, in at least 1 living area: 1-phase airconditioning; Energy rating: EER 3.0 - 3.5		✓	✓
The applicant must install the following cooling system, or a system with a higher energy rating, in at least 1 bedroom: 1-phase airconditioning; Energy rating: EER 3.0 - 3.5		✓	✓
Heating system			
The applicant must install the following heating system, or a system with a higher energy rating, in at least 1 living area: 1-phase airconditioning; Energy rating: EER 3.5 - 4.0		✓	✓
The applicant must install the following heating system, or a system with a higher energy rating, in at least 1 bedroom: 1-phase airconditioning; Energy rating: EER 3.5 - 4.0		✓	✓
Ventilation			
The applicant must install the following exhaust systems in the development:			
At least 1 Bathroom: individual fan, ducted to façade or roof; Operation control: manual switch on/off		✓	✓
Kitchen: individual fan, ducted to façade or roof; Operation control: manual switch on/off		✓	✓
Laundry: natural ventilation only, or no laundry; Operation control: n/a		✓	✓
Artificial lighting			
The applicant must ensure that the "primary type of artificial lighting" is fluorescent or light emitting diode (LED) lighting in each of the following rooms, and where the word "dedicated" appears, the fittings for those lights must only be capable of accepting fluorescent or light emitting diode (LED) lamps:			
• at least 4 of the bedrooms / study; dedicated		✓	✓
• at least 3 of the living / dining rooms; dedicated		✓	✓
• the kitchen; dedicated		✓	✓

Energy Commitments	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
<ul style="list-style-type: none"> all bathrooms/toilets; dedicated 		✓	✓
<ul style="list-style-type: none"> the laundry; dedicated 		✓	✓
<ul style="list-style-type: none"> all hallways; dedicated 		✓	✓
Natural lighting			
The applicant must install a window and/or skylight in 2 bathroom(s)/toilet(s) in the development for natural lighting.	✓	✓	✓
Other			
The applicant must install a gas cooktop & electric oven in the kitchen of the dwelling.		✓	
The applicant must construct each refrigerator space in the development so that it is "well ventilated", as defined in the BASIX definitions.		✓	
The applicant must install a fixed outdoor clothes drying line as part of the development.		✓	

Legend

In these commitments, "applicant" means the person carrying out the development.

Commitments identified with a  in the "Show on DA plans" column must be shown on the plans accompanying the development application for the proposed development (if a development application is to be lodged for the proposed development).

Commitments identified with a  in the "Show on CC/CDC plans and specs" column must be shown in the plans and specifications accompanying the application for a construction certificate / complying development certificate for the proposed development.

Commitments identified with a  in the "Certifier check" column must be certified by a certifying authority as having been fulfilled, before a final occupation certificate (either interim or final) for the development may be issued.

BASIX[®]Certificate

Building Sustainability Index www.basix.nsw.gov.au

Single Dwelling

Certificate number: 1036079S




This certificate confirms that the proposed development will meet the NSW government's requirements for sustainability, if it is built in accordance with the commitments set out below. Terms used in this certificate, or in the commitments, have the meaning given by the document entitled "BASIX Definitions" dated 06/10/2017 published by the Department. This document is available at www.basix.nsw.gov.au

Secretary

Date of issue: Tuesday, 13 August 2019

To be valid, this certificate must be lodged within 3 months of the date of issue.



Project summary		
Project name	192120.07	
Street address	Lot 3338 Proposed Road 028 Road Jordan Springs 2747	
Local Government Area	Penrith City Council	
Plan type and plan number	deposited -	
Lot no.	3338	
Section no.	-	
Project type	separate dwelling house	
No. of bedrooms	4	
Project score		
Water	 40	Target 40
Thermal Comfort	 Pass	Target Pass
Energy	 50	Target 50

Certificate Prepared by
Name / Company Name: Accelerate Sustainability Assessments
ABN (if applicable): 81625027778

Description of project

Project address

Project name	192120.07
Street address	Lot 3338 Proposed Road 028 Road Jordan Springs 2747
Local Government Area	Penrith City Council
Plan type and plan number	Deposited Plan -
Lot no.	3338
Section no.	-

Project type

Project type	separate dwelling house
No. of bedrooms	4

Site details

Site area (m²)	275
Roof area (m²)	160
Conditioned floor area (m2)	159.4
Unconditioned floor area (m2)	12.32
Total area of garden and lawn (m2)	120

Assessor details and thermal loads

Assessor number	n/a
Certificate number	n/a
Climate zone	n/a
Area adjusted cooling load (MJ/m².year)	n/a
Area adjusted heating load (MJ/m².year)	n/a

Project score

Water	✓ 40	Target 40
Thermal Comfort	✓ Pass	Target Pass
Energy	✓ 50	Target 50

Schedule of BASIX commitments

The commitments set out below regulate how the proposed development is to be carried out. It is a condition of any development consent granted, or complying development certificate issued, for the proposed development, that BASIX commitments be complied with.

Water Commitments	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
Fixtures			
The applicant must install showerheads with a minimum rating of 3 star (> 7.5 but <= 9 L/min) in all showers in the development.		✓	✓
The applicant must install a toilet flushing system with a minimum rating of 4 star in each toilet in the development.		✓	✓
The applicant must install taps with a minimum rating of 3 star in the kitchen in the development.		✓	
The applicant must install basin taps with a minimum rating of 5 star in each bathroom in the development.		✓	
Alternative water			
Rainwater tank			
The applicant must install a rainwater tank of at least 2000 litres on the site. This rainwater tank must meet, and be installed in accordance with, the requirements of all applicable regulatory authorities.	✓	✓	✓
The applicant must configure the rainwater tank to collect rain runoff from at least 156.37 square metres of the roof area of the development (excluding the area of the roof which drains to any stormwater tank or private dam).		✓	✓
The applicant must connect the rainwater tank to: <ul style="list-style-type: none"> all toilets in the development the cold water tap that supplies each clothes washer in the development at least one outdoor tap in the development (Note: NSW Health does not recommend that rainwater be used for human consumption in areas with potable water supply.) 		✓ ✓ ✓	✓ ✓ ✓

Thermal Comfort Commitments	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
General features			
The dwelling must not have more than 2 storeys.	✓	✓	✓
The conditioned floor area of the dwelling must not exceed 300 square metres.	✓	✓	✓
The dwelling must not contain open mezzanine area exceeding 25 square metres.	✓	✓	✓
The dwelling must not contain third level habitable attic room.	✓	✓	✓
Floor, walls and ceiling/roof			
The applicant must construct the floor(s), walls, and ceiling/roof of the dwelling in accordance with the specifications listed in the table below.	✓	✓	✓

Construction	Additional insulation required (R-Value)	Other specifications
floor - concrete slab on ground, 75 square metres	nil	
floor - above habitable rooms or mezzanine, 8 square metres, framed	nil	
floor - suspended floor above garage, framed	0.3 (or 1 including construction) (down)	
external wall - brick veneer	2.06 (or 2.60 including construction)	
external wall - framed (weatherboard, fibre cement, metal clad)	2.20 (or 2.60 including construction)	
internal wall shared with garage - plasterboard	nil	
ceiling and roof - flat ceiling / pitched roof	ceiling: 4 (up), roof: foil/sarking	unventilated; dark (solar absorptance > 0.70)

Note	• Insulation specified in this Certificate must be installed in accordance with Part 3.12.1.1 of the Building Code of Australia.
Note	• In some climate zones, insulation should be installed with due consideration of condensation and associated interaction with adjoining building materials.

Thermal Comfort Commitments	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
Windows, glazed doors and skylights			
The applicant must install the windows, glazed doors and shading devices described in the table below, in accordance with the specifications listed in the table. Relevant overshadowing specifications must be satisfied for each window and glazed door.	✓	✓	✓
The dwelling may have 1 skylight (<0.7 square metres) which is not listed in the table.	✓	✓	✓
<p>The following requirements must also be satisfied in relation to each window and glazed door:</p> <ul style="list-style-type: none"> For the following glass and frame types, the certifier check can be performed by visual inspection. <ul style="list-style-type: none"> - Aluminium single clear - Aluminium double (air) clear - Timber/uPVC/fibreglass single clear - Timber/uPVC/fibreglass double (air) clear 	✓	✓	✓ ✓

Window/glazed door no.	Maximum height (mm)	Maximum width (mm)	Type	Shading Device (Dimension within 10%)	Overshadowing
North-East facing					
Ens	1500	600	aluminium, single, clear	eave 560 mm, 0 mm above head of window or glazed door	not overshadowed
Bed 2	1800	800	aluminium, single, clear	eave 560 mm, 0 mm above head of window or glazed door	not overshadowed
South-East facing					
Bed 4	1000	1800	aluminium, single, clear	eave 560 mm, 0 mm above head of window or glazed door	not overshadowed
Bed 3	1000	1800	aluminium, single, clear	eave 560 mm, 0 mm above head of window or glazed door	not overshadowed
Family	2100	2600	aluminium, single, clear	solid overhang 2745 mm, 150 mm above head of window or glazed door	not overshadowed
Dining	1800	2700	aluminium, single, clear	eave 560 mm, 100 mm above head of window or glazed door	not overshadowed

Window/glazed door no.	Maximum height (mm)	Maximum width (mm)	Type	Shading Device (Dimension within 10%)	Overshadowing
South-West facing					
Family	1800	800	aluminium, single, clear	none	not overshadowed
Stairs	600	1800	aluminium, single, clear	eave 560 mm, 0 mm above head of window or glazed door	not overshadowed
Hall	1800	600	aluminium, single, clear	eave 560 mm, 0 mm above head of window or glazed door	not overshadowed
Bath	1200	1400	aluminium, single, clear	eave 560 mm, 0 mm above head of window or glazed door	not overshadowed
Family	1800	800	aluminium, single, clear	none	not overshadowed
Dining	2100	1800	aluminium, single, clear	solid overhang 3450 mm, 150 mm above head of window or glazed door	not overshadowed
North-West facing					
Master	1800	1400	aluminium, single, clear	eave 560 mm, 0 mm above head of window or glazed door	not overshadowed
Master	1800	600	aluminium, single, clear	eave 560 mm, 0 mm above head of window or glazed door	not overshadowed
Master	1800	600	aluminium, single, clear	eave 560 mm, 0 mm above head of window or glazed door	not overshadowed
WIR	1500	1200	aluminium, single, clear	eave 560 mm, 0 mm above head of window or glazed door	not overshadowed
Entry	2400	1050	aluminium, single, clear	solid overhang 1710 mm, 0 mm above head of window or glazed door	not overshadowed

Energy Commitments	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
Hot water			
The applicant must install the following hot water system in the development, or a system with a higher energy rating: gas instantaneous with a performance of 6 stars.	✓	✓	✓
Cooling system			
The applicant must install the following cooling system, or a system with a higher energy rating, in at least 1 living area: 1-phase airconditioning; Energy rating: EER 3.0 - 3.5		✓	✓
The applicant must install the following cooling system, or a system with a higher energy rating, in at least 1 bedroom: 1-phase airconditioning; Energy rating: EER 3.0 - 3.5		✓	✓
Heating system			
The applicant must install the following heating system, or a system with a higher energy rating, in at least 1 living area: 1-phase airconditioning; Energy rating: EER 3.5 - 4.0		✓	✓
The applicant must install the following heating system, or a system with a higher energy rating, in at least 1 bedroom: 1-phase airconditioning; Energy rating: EER 3.5 - 4.0		✓	✓
Ventilation			
The applicant must install the following exhaust systems in the development:			
At least 1 Bathroom: individual fan, ducted to façade or roof; Operation control: manual switch on/off		✓	✓
Kitchen: individual fan, ducted to façade or roof; Operation control: manual switch on/off		✓	✓
Laundry: natural ventilation only, or no laundry; Operation control: n/a		✓	✓
Artificial lighting			
The applicant must ensure that the "primary type of artificial lighting" is fluorescent or light emitting diode (LED) lighting in each of the following rooms, and where the word "dedicated" appears, the fittings for those lights must only be capable of accepting fluorescent or light emitting diode (LED) lamps:			
• at least 4 of the bedrooms / study; dedicated		✓	✓
• at least 2 of the living / dining rooms; dedicated		✓	✓
• the kitchen; dedicated		✓	✓

Energy Commitments	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
<ul style="list-style-type: none"> all bathrooms/toilets; dedicated 		✓	✓
<ul style="list-style-type: none"> the laundry; dedicated 		✓	✓
<ul style="list-style-type: none"> all hallways; dedicated 		✓	✓
Natural lighting			
The applicant must install a window and/or skylight in 2 bathroom(s)/toilet(s) in the development for natural lighting.	✓	✓	✓
Other			
The applicant must install a gas cooktop & electric oven in the kitchen of the dwelling.		✓	
The applicant must construct each refrigerator space in the development so that it is "well ventilated", as defined in the BASIX definitions.		✓	
The applicant must install a fixed outdoor clothes drying line as part of the development.		✓	

Legend

In these commitments, "applicant" means the person carrying out the development.

Commitments identified with a  in the "Show on DA plans" column must be shown on the plans accompanying the development application for the proposed development (if a development application is to be lodged for the proposed development).

Commitments identified with a  in the "Show on CC/CDC plans and specs" column must be shown in the plans and specifications accompanying the application for a construction certificate / complying development certificate for the proposed development.

Commitments identified with a  in the "Certifier check" column must be certified by a certifying authority as having been fulfilled, before a final occupation certificate (either interim or final) for the development may be issued.