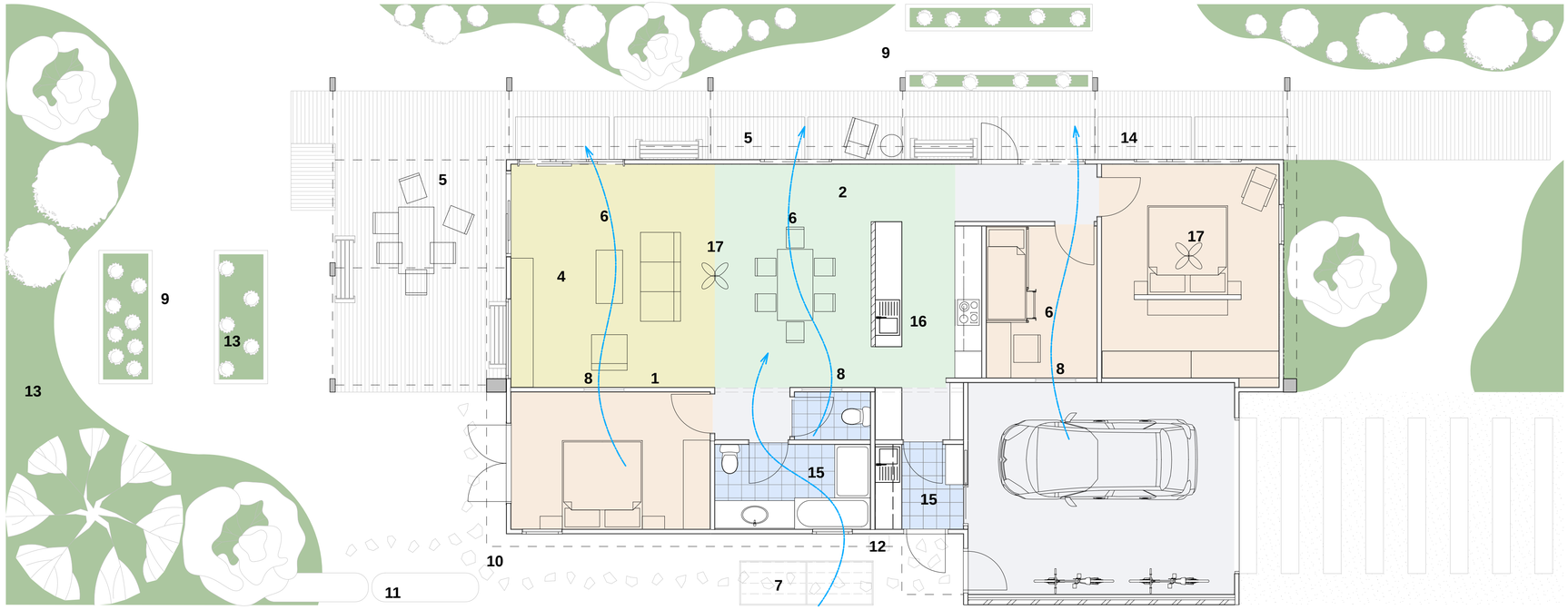

MASS & INSULATION

1 Highly insulated external walls. Insulated internal walls surrounds living area, also creating sound barrier between living and sleeping quarters

2 Dark tiled/ polished concrete to absorb winter rays over waffle slab providing a thermal bank in winter and heat sink in summer

3 Option to upgrade to 10 star - Add reversed (& recycled) brick veneer ext wall R3.5 High Density Foam Insulation battened externally. Provides thermal lag & further stabilises internal temperature. Recycled brick provides thermal mass to reduce operational energy without a big compromise in embodied energy from virgin stock

Big Little

LIGHT & VENTILATION

4 Extra height in living area provides greater solar access through high windows and a sense of space

5 Northern eaves sized to shade in summer, and let in winter sun, consisting of fixed photovoltaic panels and deciduous grapevines for extra summer shading under the verandah & rear alfresco. Pergola uses tensioned rods to minimise winter shading from structure

6 Windows & doors aligned in directions of prevailing summer breezes (sth to nth in Melbourne) to maximise passive cooling & effective night purging

7 Washing line placed to pre-cool the breezes prior to entry to house

8 Clerestory windows provide secure ventilation & night purging strategies as well as bringing sun deep into living space

FOOD &WATER

9 Potential for north & west food producing gardens & food forrest with great solar access, thus a reduction in food miles. Vegetable/ herb garden bed easily accessible from kitchen

10 Roof pitched in one direction to allow for easy water collection to tanks.

11 Min. 5k litre rain water tank, plumbing captures water to flush toilets, run cold laundry tap and exterior garden taps

12 Grey water kept separate from sewer for later pickup. As an option, grey water collected from bath, shower and laundry can be directed sub-surface to fruit trees

13 Rain water from tank can be made to drip-irrigate any garden beds

LOW BILLS AND ENERGY POSITIVE

14 Integrated photovoltaic panels, as part of the fixed northern shade reduces extra materials

15 Wet areas are grouped to minimise plumbing runs and hot water wasted in pipeworks. Redwater valves divert any "cold" hot water from the drain to the water tank

16 Location of solar hot water on frame over wet areas to minimise plumbing run heat loss

17 Ceiling fans are an energy efficient form of active cooling in all living spaces

At 125m² + garage this single level 9 star house is low in maintenance. The floor plan is adaptable to suit various stages of life

Positive Footprints
9 Star Series

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