

| Northshore Hamilton List of Lot Requirements |                                                                                                                                                                                                                                                   | Achievable<br>Yes/No | Comment                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|----------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>1 Ecosystems</b>                          |                                                                                                                                                                                                                                                   |                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 1.1                                          | Integrated water management plan incorporating WSPUD - set quantifiable water quality targets and verify design through accepted modelling (e.g. MUSIC).                                                                                          | Yes                  | A site based stormwater management plan shall be prepared during the Development Application phase and Detail Design phase of this development. This includes water quality modelling via the MUSIC program.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| 1.2                                          | Install effective sediment and erosion control measures during construction and operation.                                                                                                                                                        | Yes                  | An erosion sediment control program will be prepared and certified by the design engineer. During construction the program shall be implemented and adhered to by the contractor.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| 1.3                                          | Landscape areas include at least 50% locally occurring native plants or species and species that provide habitat and food resources for local fauna.                                                                                              | No                   | As the internal landscape is on-structure this does not typically support native rod growth. However the deep planting provides ample shelter and protection for fauna habitat with some species providing berries for food.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| 1.4                                          | Contribution of green space – includes publicly accessible and private areas e.g. landscaped areas.                                                                                                                                               | Yes                  | The landscape provides a mix of public, semi-private and private green breakout spaces that deliver a vibrant, sub-tropical ground plane that supports circulation.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>2 Waste</b>                               |                                                                                                                                                                                                                                                   |                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 2.1                                          | Waste management plan for pre-construction and construction phases of the development.                                                                                                                                                            | Yes                  | To be prepared for certification prior to the commencement of construction.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| 2.2                                          | Reuse of asphalt, concrete and gravel where possible - depending on suitability and classification.                                                                                                                                               | N/A                  | There is no existing site material on-site available or suitable for re-use.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| 2.3                                          | Excavated site soils in excess to the project requirements shall be retained within the precinct for reuse, subject to sampling results and approval from appropriate agency.                                                                     | No                   | The site will need to be remediated due to the combination of fill/marine clay/sand, contamination and presence of acid sulfate soils. Accordingly, re-use of excavated material in excess of project requirements will not be possible.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| 2.4                                          | Recycle or reuse at least 60% of all civil and built form construction waste (by mass).                                                                                                                                                           | N/A                  | There is no existing site material on-site available or suitable for re-use.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| 2.5                                          | Buildings are designed and equipped with sorting facilities to separate waste e.g. drive or central collection point.                                                                                                                             | Yes                  | A recycling waste chute and recycled bins will be provided to each building. Each site has central collection point to ensure that the opportunity for waste management is optimised. The provision of garden alignments will encourage the reuse of green waste into vegetable gardens.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| 2.6                                          | Facilitate a waste recycling induction for all tenants.                                                                                                                                                                                           | Yes                  | A "Building Users' Guide" will be provided alerting occupants to various waste minimisation strategies and the facilities available to them.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>3 Energy</b>                              |                                                                                                                                                                                                                                                   |                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 3.1                                          | Building orientation is based on passive solar design and energy-efficiency principles.                                                                                                                                                           | Yes                  | Each facade has been designed to optimise solar control through the use of wide balconies, detail unit design, provision of sun screening to north facing facades. West facing facades on Site C are designed to address the street and those units will be provided with a higher level of performance glass and internal blinds. Building scale and mass has also been considered with lower than usual buildings being located adjacent to the new cross street and other communal spaces. The taller buildings are located adjacent Macartney Street to ensure that shadow are not overly cast into public and open space.                                                                                                                                                                                                                  |
| 3.2                                          | Eaves and external shade structures are incorporated into buildings to limit summer sun and maximise winter sun.                                                                                                                                  | Yes                  | All units are fringed with a wide balcony to ensure that external space is optimised. The balcony has the additional benefit of providing sun shading to internal space. Where facades are not fringed with a balcony, sun hoods are provided to ensure that sun control is considered.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| 3.3                                          | Development utilizes off-peak energy and timers to reduce peak load from uses such as swimming pool filters.                                                                                                                                      | Yes                  | The development will aim to reduce peak demand through utilising off-peak energy to areas such as swimming pools. In addition solar thermal panels will be considered to heat the pools.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| 3.4                                          | Development includes energy-efficient lighting systems such as fluorescent fittings and solar power lighting to common areas.                                                                                                                     | Yes                  | Lighting shall be energy efficient such as fluorescent or LED. Solar power will be considered for common areas.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 3.5                                          | Demonstrate measures to assist with community education of energy efficiency and greenhouse gas reduction. This may be in the form of a household energy rating, interpretive signage throughout common areas, fact sheets and energy meters etc. | Possible             | Suggested measures could include:<br>(i) Public efficiency displays for annual consumption values for each apartment/building/site wide water and energy;<br>(ii) Real-time water and energy consumption monitoring - Flat screens in reception areas or weekly print outs placed on display;<br>(iii) Promotion of sustainable technologies such as PV's and solar thermal to heat the pools;<br>(iv) Introducing Green Days - i.e. displays provide weather information to promote residents to switch to natural ventilation when ambient conditions are favourable;<br>(v) All residents will have their own metering for all utilities providing them the opportunity to assess their own energy usage and compare to an average as displayed in the public areas.                                                                         |
| 3.6                                          | Reduce greenhouse gas production within the development by at least 20% more than required under current Federal, State and local government regulatory means.                                                                                    | Possible             | There are no regulatory standards for Greenhouse gas production in the built environment.<br>(i) Each apartment shall include its own efficient VFR split system with remote control to allow part load efficiency. Being individual to each unit the a/c shall only operate when required by each resident.<br>(ii) All apartments are capable of operating in a mixed mode capacity, i.e. operable windows to promote natural ventilation throughout the living spaces. The installed a/c can be used in ventilation mode only, if required, to further boost air movement and increase occupant comfort.<br>(iii) Good access to daylight is provided to reduce the usage of artificial lighting.<br>(iv) Solar Panels and solar thermal will be considered to be installed on-site to reduce overall energy consumption of the development. |

**PLANS AND DOCUMENTS  
referred to in the ULDA  
APPROVAL dated 27 / 6 / 12**



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| 4   | <b>Materials</b><br>Ensure the use of a minimum 20% construction (by volume) are made from either (or a combination of):<br>o Materials with a recycled content (4.2.1)<br>o Reused materials (4.2.2)<br>o Renewable materials (4.2.3)<br>4.1<br>o Total lifecycle energy (4.2.4)<br>o Responsibly Manufactured Materials (4.2.5) Building materials are sourced from local manufacturers and/or suppliers where possible, or utilize the most economical method of transportation with regard to fossil fuels. | Possible | The developer will endeavor to include this requirement as a qualifier for tendering for supply during the construction phase of the project. The use of recycled materials such as timbers and stonework is envisioned especially in the public realm.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 4.2 | Use low emission paints on all internal painted surfaces.                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Yes      | The specifications of this development will utilise low emission paints to all painted surfaces. Ground floor paint finishes are to be kept to a minimum through the use of galvannead steel, natural stone and pigmented concrete                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| 4.3 | Use low emission floor coverings on all indoor covered floors.                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Yes      | All internal finishes will be specified as low emission coverings                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| 4.4 | Use low emission sealants and adhesives where possible.                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Yes      | All internal finishes will be specified as low emission coverings                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| 4.5 | Select materials and suppliers that minimise and/or recycle packaging.                                                                                                                                                                                                                                                                                                                                                                                                                                          | Possible | The developer will endeavor to include the requirement as a qualifier for tendering for supply during the construction phase of the project.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| 4.6 | Provide end user education regarding the use of environmentally responsible materials, low emission materials and maintenance requirements. This may be demonstrated through interpretive signage, fact sheets and end user manuals.                                                                                                                                                                                                                                                                            | Yes      | A 'Building Users' Guide' will be prepared that incorporates information on each of the key features of the building to help owners and tenants understand how to make the most of their building                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| 5   | <b>Water</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| 5.1 | Reduce potable water usage within the development (excluding common area 5.1.1) irrigation requirements captured in 5.1.2) by at least 20% more than required under relevant Federal, State and Local Government regulatory means.                                                                                                                                                                                                                                                                              | Yes      | No standards for potable water consumption usage are stated however the following fixtures and fittings can be proposed against WELS ratings to reduce water consumption:<br>Taps - 3 star to a 5 star WELS tap fitting ratings - 8 litres to 5 litres/min, 30% saving<br>Showers - 2 star to a 3 star - 10 litres/min to 8 litres/min, 20% saving<br>Lavatories - 3 star to 4 star - 4 litres to 3 litres/min, 25% saving<br>Rainwater will be collected and stored on-site and utilised for site wide irrigation, common area washing (garbage bins, resident car washing, etc.<br>Very similar to means of education for greenhouse gases as in section 3.6. Examples include signs notifying patrons of rain water is in use and fact sheets regarding saved potable water to work collaboratively with the architects                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| 5.2 | Provide end user education regarding potable water reduction throughout the development, including measures undertaken to reduce potable water usage in the built form and reduction in irrigation requirements for public open space and common areas. This may be demonstrated through interpretive signage, fact sheets and end user manuals.                                                                                                                                                                | Yes      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| 6   | <b>Community</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| 6.1 | Establish processes to manage any items of European and / or Aboriginal cultural heritage that may be uncovered during construction works and ensure accordance with the provisions relating to cultural heritage finds contained in Aboriginal Cultural Heritage Act 2003 (Qld) Duty of Care Guidelines.                                                                                                                                                                                                       | Yes      | The Aboriginal Cultural Heritage Act 2003 Duty of Care Guidelines suggests that where an activity is proposed on land that has previously been subject to significant ground disturbance 'it is generally unlikely that the activity will harm Aboriginal cultural heritage in these circumstances the Aboriginal Cultural Heritage Duty of Care Guidelines suggests that it is reasonable and practicable that the activity proceeds without further cultural heritage assessment. The site has been used for previous fill and has been subject to significant ground disturbance'. However, if at any time a Cultural Heritage Find is located on the site, activities on the site will cease immediately and the Aboriginal Party for the area will be contacted to obtain their advice and agreement as to how to best manage the find to ensure that the activities on the site do not harm Aboriginal cultural heritage in accordance with the Aboriginal Cultural Heritage Duty of Care Guidelines. Reasonable and practicable control measures may include but are not limited to:<br>- Indicating all employees on site of cultural heritage prior to commencement of the development<br>- Maintaining contact details of relevant agencies/groups in the event of a find or suspected discovery and notifying the Cultural Heritage Coordination Unit and/or local Aboriginal groups of all finds on the site.<br>- Stopping work on the vicinity of areas where items of possible cultural/heritage significance are found until such time that liaison with DEHVI and/or the local Aboriginal groups has been undertaken. |
| 6.2 | Secure bicycle-storage facilities for the use of apartment owners and tenants are provided at a rate of one bicycle space per two dwellings.                                                                                                                                                                                                                                                                                                                                                                    | Yes      | Total of 142 bicycle-storage facilities are provided at Basement level and on Ground level(L01)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| 6.3 | The design and layout of development must achieve adequate accessibility, permeability and movement.                                                                                                                                                                                                                                                                                                                                                                                                            | Yes      | The precinct is designed to achieve a higher than usual level of pedestrian permeability with internal cross block pedestrian links in an east west direction as well as north south linkages. Site C has expressed balcony access ensuring a high level of movement activity as well as enhanced OPENED. Site D has an internal roundabout designed to encourage slow vehicular access to the centre of the site as well as being pedestrian friendly. Site D provides a covered walkway that connects Fernona road to the next north south road                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| 6.4 | Development incorporates crime prevention through environmental design principles including maximising opportunities for casual surveillance of public areas by locating large windows and useable veranda spaces overlooking streets, parks and communal areas.                                                                                                                                                                                                                                                | Yes      | Site C rear access balconies provide a high level of crime prevention as well as some of the units being inward looking. The cross block link on Site C are all provided with lockable gates for after hours security. Site D has a cross block public link as well as a publicly accessible traffic roundabout. Units are designed to enable visual access to all parts of the site.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| 6.5 | Provide good ventilation to all dwellings, offices and facilities.                                                                                                                                                                                                                                                                                                                                                                                                                                              | Yes      | All buildings are provided with operable windows and balconies. Residential units are all provided with wide useable balconies. Site C -- each unit has the ability to cross ventilate with single sided access balconies.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |