**GREEN TRAVEL PLAN TEMPLATE**

**Company Name**

**Somewhere St**

**Suburb, 3000**

**Draft Prepared: Month Year**

**Introduction**

This template provides information to building developers, owners and operators on the production of a typical Green Travel Plan (GTP) for commercial developments. It highlights the measures that should be considered in design at planning stage to ensure suitable infrastructure is available for successful travel plan adoption, and considers actions that can be taken during operation.

This Green Travel Plan consists of five sections:

1. Aim
2. Background
3. Targets
4. Actions
5. Monitoring & Reporting

**1. Aim**

The aim sets out what you want to achieve and when. It should be closely linked to the more detailed targets (below) and contain a timeframe and a percentage reduction figure.

*E.g. The overall aim of the plan is to cut the number of single occupancy car journeys to, from and for work by employees by X per cent by XXXX.*

Please make a clear commitment to the implementation of this Green Travel Plan.

**2. Background**

This section provides the context for your plan.

State all intended uses of land (offices, retail, dwellings, etc.) and the scale of the development (floor area, number of shops, dwellings, etc.). Please include reference to any relevant policies or strategies, or planning requirements such as planning permit conditions that may be relevant.

If Travel Plan is being developed at Planning Stage, please state type of ownership of the site. For example, owner/developer to operate, lease or on-sell development.

Provide a site location map highlighting nearby amenities and transport options. You should also identify any specific transport opportunities and constraints presented by your site and/or surrounding neighbourhood. Detail the current public transport networks available to/from the site including bus, train and tram services and bike paths/lanes. Include the number of car spaces and bike spaces available (including visitors spaces) both off street and on street and do some research and investigation of how staff/patrons from a nearby workplaces of a similar size and type travel to give you a baseline.

Estimate how many staff will work the proposed premises and state their expected travel habits.

**3. Targets**

This section is where you set out what you hope to achieve from the plan.

Your targets should be achievable, measurable and stretching. The information that you have collected will enable you to make a judgement about the opportunities for alternatives to commuting and work trips in single occupant vehicles. To arrive at targets, you need to assess these opportunities against the effort and money that can be committed to them as well as the expectation from Council based on any existing planning permit conditions or the parking waiver the Travel Plan is offsetting. Indicative targets and measures can be produced at the planning stage based on known information. If a property is to be sold or leased, the Travel Plan can be included in the Sales and Leasing Agreements, with the condition that the plan will be further developed by the Body Corporate/tenants at a later stage.

The overall target should be expressed in terms of reducing car driver trips to and from the site, which can usefully be expressed as a percentage of staff travelling by single occupant vehicle. This measurement allows you to judge your progress over time, even if staff numbers on site go up or down.

You may also find it helpful to set sub-targets to show the increases you aim to achieve in other ways of travelling to your site, such as walking or public transport, and a target for reducing the proportion of business travel made by car.

For example;

- Achieve 50% of staff traveling to work in a single occupant vehicle by 2020

- Increase the proportion of active transport trips (walking and cycling) to work to 15% by 2020.

- Reduce the number of trips by single occupant vehicle for work purposes to 50% by 2020.

**4. Actions**

This section sets out what you are going to do, when, who is going to do it and an approximate cost for each action. You may want to create an Action Plan for each target you may have identified above or for each mode of travel that will feature. The latter is done below as an example with an example Action Plan for generic actions also.

Describe all aspects of Green Travel Plan that relate to the built form, i.e. number of physical car and bike parking spaces, end-of-trip change and shower facilities for cyclists, visitor/customer bike parking spaces, pedestrian entrances and walkways, etc. Note that these should all be reflected in the architectural drawings in a consistent manner. Provide extracts from plans as illustrations where relevant.

Outline the roles and responsibilities for the delivery of the Green Travel Plan actions, including identifying who is responsible for delivering aspects of the plan which relate to communications as well as monitoring and reporting.

Please note that are examples of actions in tables at the end of this template document and a reference only and that many more actions could be developed. The strength of your actions must reflect your targets – strong targets require strong actions.

1. **Monitoring & Reporting**

The Green Travel Plan should be monitored to make sure it is achieving the targets as set out in Section 3 above. Annual monitoring and review at a minimum is strongly recommended and should be focused and low cost and focus on employees travel habits, barriers and opportunities to sustainable transport use.

Please indicate who will undertake this monitoring and reporting process, how often, who will receive the reporting information and who is ultimately responsible.

Monitoring of your GTP can either be a long-term process through travel diaries and GPS monitoring of pool vehicles, for example, or can be undertaken during a focused survey period, where staff/patrons/visitors travel habits over the period of a week are recorded and reported on. You should consider the following:

* + How you conducted your monitoring,
	+ The results of your monitoring activities,
	+ How the results compare to your targets,
	+ What actions have been implemented from your travel plan, and
	+ What actions are yet to be implemented and when you propose to do so.

You should also identify how the findings from the report will be communicated to staff and/or management, and how processes can be modified/improvements made prior to the next review.

**Appendix 1: Possible Actions for a Green Travel Plan**

**General & Communications Actions**

|  |  |  |  |
| --- | --- | --- | --- |
| **Action** | **Timeline** | **By whom**  | **Approx cost** |
| Promotion including:* + Display boards or screens in prominent locations to show public transport maps and timetables.
	+ An events calendar – 3-4 events per year. Best in conjunction with state wide events such as Ride to Work Day, World Environment Day, National Walk to Work Day. Plan for lunch, morning teas or breakfasts, guest speakers, demonstrations etc.
	+ Toilet talk – a series of posters behind toilet doors where people can read them in private!
	+ Wall of Honour – staff who travel sustainably are chosen (one per month) for a photograph and quotes on a wall of honour dedicated to green travellers
 | From time of occupation |  |  |
| A monthly newsletter including;* News, events and articles on the environment, health and fitness.
* Remind staff that they don't always need to walk in the shoes they wear for work - these can be left at work and staff can come in trainers.
* Outline new initiatives and how staff can access them or get involved.
* Staff profiles – who is getting involved and reaping the rewards.
* Facts and figures from around Australia and overseas.
* Information regarding up and coming events.
 | Ongoing |  |  |
| Monitoring & Reporting – Conduct surveys and keep records of the success/uptake of other initiatives. | Ongoing |  |  |

**WALKING**

|  |  |  |  |
| --- | --- | --- | --- |
| **Action** | **Timeline** | **By whom**  | **Approx cost** |
| Produce a map showing safe walking routes to and from your site with times, not distances, to local facilities, such as shops and bus stops (e.g. Walkscore)  |  |  |  |
| Open-up short cuts for pedestrian access across the proposed work site  |  |  |  |
| Review condition of existing footpaths onsite Provide additional or upgraded footpaths to meet staff needs  |  |  |  |
| Negotiate with your local council for improvements to footpaths used by staff  |  |  |  |
| Have some Walk to Work days encouraging staff to come by alternative means |  |  |  |

**CYCLING**

|  |  |  |  |
| --- | --- | --- | --- |
| **Action** | **Timeline** | **By whom**  | **Approx cost** |
| Provide sufficient number of bicycle parking spaces to meet peak needs, which is easily accessible, well lit and secure. |  |  |  |
| Provide cycle parking for visitors. |  |  |  |
| Ensure bike parking is clearly visible or provide signage to direct people to bike parking spaces. |  |  |  |
| Develop a 'bike buddy' scheme for inexperienced cyclists. |  |  |  |
| Establish an internal Bicycle Users Group (BUG). |  |  |  |
| Review condition of existing onsite cycle routes  |  |  |  |
| Upgrade or provide new onsite cycle routes  |  |  |  |
| Supply a workplace toolkit - this can consist of puncture repair equipment, a bike pump, a spare lock and lights  |  |  |  |
| Provide interest-free loans for staff to buy a bicycle and accessories, which they then pay back from their wages  |  |  |  |
| Provide an onsite cycle maintenance service (either as a special one-day event or on a regular basis)  |  |  |  |
| Produce a map showing quiet cycle routes to the workplace.  |  |  |  |
| Participate in annual events such as 'Ride to Work Day'  |  |  |  |
| Provide annual membership to staff for organisations such Bicycle Network  |  |  |  |
| Provide discounted bicycle purchase through bulk purchasing agreements |  |  |  |
| Provide a staff bike pool |  |  |  |

**END OF TRIP FACILTIES**

|  |  |  |  |
| --- | --- | --- | --- |
| **Action** | **Timeline** | **By whom**  | **Approx cost** |
| Provide # of showers and changing rooms  |  |  |  |
| Provide lockers for a change of clothes – ensure lockers are in close proximity to changing rooms |  |  |  |
| Provide drying room/facilities  |  |  |  |

**PUBLIC TRANSPORT**

|  |  |  |  |
| --- | --- | --- | --- |
| **Action** | **Timeline** | **By whom**  | **Approx cost** |
| Develop a map showing public transport routes to your worksite |  |  |  |
| Put up a noticeboard or info screen with information and maps showing the main public transport routes to and from your work site |  |  |  |
| Place information on the work intranet with links to appropriate external websites |  |  |  |
| Provide a company bus that links with existing public transport services e.g. a shuttle bus between work and the train station |  |  |  |
| Provide an interest-free loan to buy an annual Myki |  |  |  |
| Provide discounted travel cards |  |  |  |
| Encourage public transport use for business travel |  |  |  |
| Ensure tickets are available at the workplace for work travel during the day |  |  |  |

**CAR POOLING**

|  |  |  |  |
| --- | --- | --- | --- |
| **Action** | **Timeline** | **By whom**  | **Approx cost** |
| Set up a car pooling database |  |  |  |
| Organise postcode lunches |  |  |  |
| Allocate priority parking spaces for car poolers |  |  |  |
| Provide a guaranteed ride home for car poolers |  |  |  |

**CAR PARKING**

|  |  |  |  |
| --- | --- | --- | --- |
| **Action** | **Timeline** | **By whom**  | **Approx cost** |
| Identify priority users of car park e.g. people with disabilities, shift workers, carpoolers. |  |  |  |
| Introduce or increase charges for car parking and use money raised for TravelSmart initiatives |  |  |  |
| Introduce an exclusion zone restricting car parking permits for staff living in close proximity to the site |  |  |  |
| Provide sustainable transport allowances for staff who surrender car parking permits |  |  |  |
| Review policy on providing parking permits for new staff |  |  |  |
| Offer cash incentives for staff willing to give up car parking spaces |  |  |  |
| Provide charging point for electric vehicles |  |  |  |
| Provide spaces for car-share |  |  |  |
| Provide spaces for mopeds/motorbikes |  |  |  |

**TRAVEL FOR WORK**

|  |  |  |  |
| --- | --- | --- | --- |
| **Action** | **Timeline** | **By whom**  | **Approx cost** |
| Audit the use of pool cars for work journeys |  |  |  |
| Audit the use of taxis for work journeys |  |  |  |
| Install teleconference facilities in offices and use to replace some regular meetings |  |  |  |

**LARGE COMMERCIAL DEVELOPMENTS**

|  |  |  |  |
| --- | --- | --- | --- |
| **Action** | **Timeline** | **By whom**  | **Approx. cost** |
| Provide on-site amenities such as cafe, crèche etc. |  |  |  |

**Appendix 2: Additional Information Sources**

**Bicycle Network**

https://www.bicyclenetwork.com.au

**Public Transport Victoria**

http://ptv.vic.gov.au

**TravelSmart**

http://www.travelsmart.gov.au

## Sample FirstRate Assessments

A representative sample of 10 apartments was modelled using the FirstRate software. This included a range of apartment layouts and orientations and also the apartments likely to have the poorest thermal performance rating. This is a useful check that the development will meet the energy rating requirements of the Building Code of Australia (BCA). A minimum average of 6 stars (138 MJ/m2 in Tullamarine climate zone 60) is required to comply with the BCA (2011), with no apartment rating less than 5 stars.

FirstRate calculates the required energy to maintain the dwelling at a comfortable temperature, using the building fabric (floors, walls/windows, roof) information as its input, plus the relevant climate zone (in this case Tullamarine, climate zone 60).

*Enter the sample NatHERS ratings (if applicable) for the development in the table below. Make sure you attach copies of the sample NatHERS rating to the completed report.*

The following star ratings were achieved:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Dwelling** | **Star Rating** | **Conditioned Floor Area** | **Total Energy Use (MJ/m2)** | **Heating Energy Use (MJ/m2)** | **Cooling Energy Use (MJ/m2)** |
|  **Enter Here**  |  **Enter Here**  |  **Enter Here**  |  **Enter Here**  |  **Enter Here**  |  **Enter Here**  |
|  **Enter Here**  |  **Enter Here**  |  **Enter Here**  |  **Enter Here**  |  **Enter Here**  |  **Enter Here**  |
|  **Enter Here**  |  **Enter Here**  |  **Enter Here**  |  **Enter Here**  |  **Enter Here**  |  **Enter Here**  |
|  **Enter Here**  |  **Enter Here**  |  **Enter Here**  |  **Enter Here**  |  **Enter Here**  |  **Enter Here**  |
|  **Enter Here**  |  **Enter Here**  |  **Enter Here**  |  **Enter Here**  |  **Enter Here**  |  **Enter Here**  |
|  **Enter Here**  |  **Enter Here**  |  **Enter Here**  |  **Enter Here**  |  **Enter Here**  |  **Enter Here**  |
|  **Enter Here**  |  **Enter Here**  |  **Enter Here**  |  **Enter Here**  |  **Enter Here**  |  **Enter Here**  |
|  **Enter Here**  |  **Enter Here**  |  **Enter Here**  |  **Enter Here**  |  **Enter Here**  |  **Enter Here**  |
| **Average** |  **-**  |  **-**  |  **-**  |  **-**  |  **-**  |

Based on this sample, the development is likely to achieve an average 6.5 star rating. Note these ratings depend on the following assumptions:

* All gaps around windows, doors are to be sealed.
* All exhaust fans are to be self-closing
* Roof insulation R4.0 (additional R-value)
* External wall insulation R2.5 (additional R-value)
* Window systems – U-value = 4.95, SHGC = 0.7 (standard aluminium frame, 6mm air gap, double glazed units)

# 3.0 Water Resources

In order to conserve our precious water resources, our cities and our buildings need to carefully plan for water efficiency, and for water use that is ‘fit-for-purpose’. Potable water is treated to drinking water standard and this water quality level is not needed for every application.

## Water Efficiency

Water fittings and appliances are rated under the Water Efficiency Labelling and Standards (WELS) scheme. Choosing high WELS rated fittings and appliances (where specified) are a key way to reduce water consumption within a development. Landscaping with low water use species reduces outdoor water use while maintaining attractive outdoor communal spaces.

*Replace the actions highlighted in red text within the ‘Response – Strategies and Innovation’ column with commitments made by the applicant. For an example see the SMP Example Report on our website.*

### Actions to maximise water efficiency

|  |  |  |
| --- | --- | --- |
| **Actions** | **Potential Impact** | **Strategies and innovations** |
| **Water efficient fittings** | High efficiency fittings can reduce water use by 50% or more.  |  **Enter Here**  **Enter Here**   **Enter Here**   |
| **Water efficient appliances** | High efficiency appliances can reduce water use by 50% or more. |  **Enter Here**   **Enter Here**   **Enter Here**   |
| **Re-use fire system test water** | Fire systems need to be tested regularly – this water can be re-used rather than wasted.  |  **Enter Here**   **Enter Here**   **Enter Here**   |
| **Water efficient landscaping & gardens** | No potable water used for garden irrigation means that potable water is not wasted but is fit for purpose |  **Enter Here**   **Enter Here**   **Enter Here**   |

*Enter your development’s actions and commitments in the box highlighted in red text. For an example see the SMP Example Report on our website.*

## Rainwater Harvesting

 **Enter Here**

 **Enter Here**

 **Enter Here**

# 4.0 Stormwater

Stormwater quality is a significant issue in urban areas as the high levels of impervious surfaces transport stormwater quickly into the drainage system along with sediment and pollutants from the urban environment. Strategies for improving stormwater include reducing volume entering the stormwater system, either by on-site re-use or by maximising on-site penetration, and also providing treatment measures so that the quality of any stormwater leaving the site is improved.

This development achieves a score of **Enter Here** using Melbourne Water’s STORM tool.

*Replace the actions highlighted in red text within the ‘Response – Strategies and Innovation’ column with commitments made by the applicant. For an example see the SMP Example Report on our website.*

|  |  |  |
| --- | --- | --- |
| **Actions** | **Potential Impact** | **Strategies and innovations** |
| **Rainwater harvesting** | Reduction in volume of stormwater to the stormwater system means integrity of stormwater infrastructure is protected. Mains consumption is reduced by on-site reuse.  |  **Enter Here**   **Enter Here**   **Enter Here**   |
| **Water Sensitive Urban Design** | Increased infiltration means that groundwater flows are improved. Treatment via raingardens means quality of stormwater entering the mains system is improved.  |  **Enter Here**   **Enter Here**   **Enter Here**   |

# 5.0 Building Materials

A building’s life cycle impact is largely influenced by material selection, including embodied energy of the material, longevity/durability, source, ability to be reused / recycled and the toxicity of material components.

Standard and certification schemes for sustainable materials, such as EcoSpecifier’s Green Tag program and Good Environmental Choice Australia (GECA), provide an independent assessment and are the best starting point for material selection for sustainability.

*Replace the actions highlighted in red text within the ‘Response – Strategies and Innovation’ column with commitments made by the applicant. For an example see the SMP Example Report on our website.*

### Actions for sustainable material selection

| **Actions** | **Potential Impact** | **Strategies and innovations** |
| --- | --- | --- |
| **Re-use of existing materials** | Avoids sending waste to landfill as well as the higher embodied in new materials.  |  **Enter Here**   **Enter Here**   **Enter Here**   |
| **Recycled content materials** | Reduced embodied energy of material by using recycled content rather than virgin materials.  |  **Enter Here**   **Enter Here**   **Enter Here**   |
| **PVC Minimisation** | Human health implications of PVC are related to chemical components used in manufacture, which are known carcinogens, mutagens and teratogens.  |  **Enter Here**   **Enter Here**   **Enter Here**   |
| **Sustainable Timber** | Avoid timber that may be illegally logged, from old growth forests, or from plantations that are poorly managed |  **Enter Here**   **Enter Here**   **Enter Here**   |
| **Dematerialisation** | Using less material where possible reduces the overall embodied energy of the building.  |  **Enter Here**   **Enter Here**   **Enter Here**   |

# 6.0 Transport

Many transport impacts are inherent to a building’s location, such as the distance from employment, shops, services, schools and recreation. However, sustainable transport options can be facilitated through a building design that promotes convenient use of bicycles and reduced dependence on private vehicle use.

This development is located close to **Enter Here** Station, and **Enter Here** Bus Services, thereby providing a range of public transport options with close proximity. The **Enter Here** shopping precincts are within walking distance.

The development is also ideally located for bicycle commuters, being close to the **Enter Here** bike path. To facilitate sustainable transport choices, a bicycle storage room is provided in the apartment basement, with **Enter Here** bicycle parking spaces. End of trip facilities are also provided within each retail tenancy.

*Replace the actions highlighted in red text within the ‘Response – Strategies and Innovation’ column with commitments made by the applicant. For an example see the SMP Example Report on our website.*

### Actions for sustainable transport

|  |  |  |
| --- | --- | --- |
| **Actions** | **Potential Impact** | **Strategies and innovations** |
| **Bicycle parking on-site** | Reduced demand on car transport, reduced demand on public transport. Active & cost effective transport option.  |  **Enter Here**   **Enter Here**   **Enter Here**   |
| **Public transport access** | Provides an alternative to private vehicle use. |  **Enter Here**   **Enter Here**   **Enter Here**   |
| **Pedestrian access** | Health and environmental benefits.  |  **Enter Here**   **Enter Here**   **Enter Here**   |
| **Car sharing schemes** | Has the potential to reduce private vehicle ownership.  |  **Enter Here**   **Enter Here**   **Enter Here**   |

# 7.0 Waste Management

*Replace the actions highlighted in red text within the ‘Response – Strategies and Innovation’ column with commitments made by the applicant. For an example see the SMP Example Report on our website.*

### Actions for waste avoidance and recycling

|  |  |  |
| --- | --- | --- |
| **Actions** | **Potential Impact** | **Strategies and innovations** |
| **Construction Waste Management Plan** | Construction and demolition waste makes up approximately one third of waste to landfill in Victoria (Sustainability Victoria). Most of this waste is inert & can be easily recycled for other purposes.  |  **Enter Here**   **Enter Here**   **Enter Here**   |
| **Operational Waste Management Infrastructure** | Convenient infrastructure can significant improve recovery rates for recyclable materials |  **Enter Here**   **Enter Here**   **Enter Here**   |

# 8.0 Urban Ecology

Urban ecology is about promoting and protecting ecosystems and biodiversity. Urban and agricultural development has caused displacement of species and degradation of natural environments – therefore in many established urban areas the aim is to increase biodiversity. Biodiversity provides a number of services that have traditionally been, and continue to be, undervalued, such as:

* Protection of water resources
* Soil formation & protection
* Nutrient storage & recycling
* Pollution breakdown
* Ecosystem maintenance

*Replace the actions highlighted in red text within the ‘Response – Strategies and Innovation’ column with commitments made by the applicant. For an example see the SMP Example Report on our website.*

### Actions for urban ecology

| **Actions** | **Potential Impact** | **Strategies and innovations** |
| --- | --- | --- |
| **Re-use of land** | Development in existing urban areas helps reduce the need for greenfield development and the associated environmental impacts, such as car dependency, increased need for infrastructure and displacement of agricultural land.  |  **Enter Here**   **Enter Here**   **Enter Here**   |
| **Topsoil retention** | Retaining topsoil conserves the valuable resource it provides and reduces unnecessary waste to landfill.  |  **Enter Here**   **Enter Here**   **Enter Here**   |
| **Outdoor communal facilities** | On average, people spend 90% of their lives indoors. There is a growing body of evidence that demonstrates how communal green spaces can offer lasting economic, environmental and social benefits.  |  **Enter Here**   **Enter Here**   **Enter Here**  |
| **Biodiversity** |  |  **Enter Here**   **Enter Here**   **Enter Here**   |

# 9.0 Innovation and ESD Excellence

Innovation and ESD Excellence is a category designed to recognise new or outstanding ESD initiatives not recognised elsewhere (such as in the Green Star tools). This development is claiming the following initiatives under this category.

*Replace the actions highlighted in red text within the ‘Response – Strategies and Innovation’ column with commitments made by the applicant. For an example see the SMP Example Report on our website.*

### Actions for Innovation and ESD Excellence

|  |  |  |
| --- | --- | --- |
| **Actions** | **Potential Impact** | **Strategies and innovations** |
| **XXXX** | xxxx  |  **Enter Here**   **Enter Here**   **Enter Here**   |
| **XXXX** | xxxx  |  **Enter Here**   **Enter Here**   **Enter Here**   |

# 10.0 Construction and Building Management

*Replace the actions highlighted in red text within the ‘Response – Strategies and Innovation’ column with commitments made by the applicant. For an example see the SMP Example Report on our website.*

### Actions for ongoing building performance

|  |  |  |
| --- | --- | --- |
| **Actions** | **Potential Impact** | **Strategies and innovations** |
| **Building fine-tuning** | Ensures the building services operate as designed, throughout various climatic conditions and with realistic occupancy profiles.  |  **Enter Here**   **Enter Here**   **Enter Here**   |
| **Building User’s Guide** | Provides educational information to the building occupants as to how to operate the building most effectively.  |  **Enter Here**   **Enter Here**   **Enter Here**   |

# 11.0 Implementation and Commissioning

Implementation of the ESD initiatives in this report requires the following process:

* Full integration with architectural plans & specifications
* Full integration with building services design drawings & specifications
* Endorsement of the ESD report with town planning drawings
* ESD initiatives to be included in plans and specifications for building approval

*Replace red text within the ‘Responsibility’ column and nominate who from the project team is responsible for the delivery of each applicable action. For an example see the SMP Example Report on our website.*

The following implementation schedule is provided.

|  |  |  |  |
| --- | --- | --- | --- |
| **Actions** | **Requirement** | **Responsibility** | **Date Completed** |
| **FirstRate (NatHERS) Assessments** | *Full FirstRate ratings for each dwelling, based on recommendation of sample ratings*  | *ESD Consultant, Architect* |  |
| **Window glazing** | *To be specified according to energy ratings & BCA* | *Architect, Builder* |  |
| **Insulation & sealing** | *To be specified according to energy ratings* | *Architect, Builder* |  |
| **Air-conditioning systems** | *Reverse cycle split systems, 5 star heating cycle and 5 star cooling cycle* | *Services Engineer, Builder* |  |
| **Hot water heating** | *Centralised solar-gas hot water system with a minimum* ***50% solar contribution*** *and a minimum* ***gas system efficiency of 86%*** | *Services Engineer, Builder* |  |
| **Lighting** | *To meet 5W/m2 as per BCA 2011* | *Architect, Builder* |  |
| **Security Doors** | *Security doors on all apartment entrance doors.*  | *Architect, Builder* |  |
| **Motion / time switch controls** | *Common area lighting (including carpark lighting) to be controlled by motion sensors or timers as appropriate.*  | *Services Engineer, Builder* |  |
| **Bike storage** | *60 bicycle parking spaces to be installed in basement storage room.*  | *Architect, Builder* |  |
| **Clothes drying** | *Foldaway clotheslines to be installed to apartment balconies* | *Architect, Builder* |  |
| **Metering** | *Install separate water and electricity meters to each apartment* | *Services Engineer, Builder* |  |
| **VSD pumps/fans** | *Specify and install pumps and fans with variable speed drives* | *Services Engineer, Builder* |  |
| **Energy efficient lifts** | *Specify and install energy efficient lifts* | *Services Engineer, Builder* |  |
| **Apartment shutdown switches** | *Each apartment to have a ‘shutdown switch’ located inside entrance doors for all non-essential appliances.*  | *Services Engineer, Builder* |  |
| **Rainwater tank** | *Specify and install 50,000 L rainwater with plumbing to all ground, first and second floor toilets.*  | *Services Engineer, Builder* |  |
| **Water efficient toilets** | *Specify and install minimum 4 star toilets* | *Architect, Builder* |  |

|  |  |  |
| --- | --- | --- |
| **Water efficient taps** | *Specify and install minimum 5 star taps* | *Architect, Builder* |
| **Water efficient showers** | *Specify and install minimum 3 star showerheads* | *Architect, Builder* |
| **Water efficient appliances** | *Specify and install dishwashers with WELS star rating within 1 star of best available* | *Architect, Builder* |
| **Fire system test water capture** | *Specify and install fire system with ability to capture and reuse water.*  | *Builder, Services Engineer* |
| **Concrete** | *Concrete to have minimum 20% recycled aggregate content.*  | *Builder* |
| **Plasterboard** | *Plasterboard to have minimum 10% recycled content.*  | *Builder* |
| **Timber** | *All timber to be FSC or AFS certified* | *Builder* |
| **Material Re-use** | *Bricks and other material to be salvaged from demolition of existing building and reused in new building.*  | *Architect, Builder* |
| **Topsoil**  | *Topsoil on existing site to be retained and used in landscaping for new building.*  | *Builder* |
| **Construction Management Plan** | *Prepare Construction Waste Management Plan to maximise recycling of construction waste (80% min).*  | *Builder* |
| **Low VOC paints, sealants, adhesives** | *Specify and use low VOC paints, sealants and adhesives* | *Architect, Builder* |
| **Building Users Guide** | *Prepare Building Users Guide and distribute to occupants. Display in prominent location at apartment entrance*  | *Owner’s Corporation, ESD Consultant, Building Services* |
| **Building tuning** | *Undertake building services fine-tuning each quarter for the first 12 months of occupation.*  | *Owner’s Corporation, Building Services* |

# APPENDIX A – Built Environment Sustainability Scorecard (BESS) Report

# INSERT COPY OF BESS SUMMARY REPORT

# – INCLUDE OTHER SUPPORTING REPORTS SUCH AS NatHERS SAMPLE RATIING AND STORM RESULTS