NORTH SYDNEY COUNCIL

Ecologically Sustainable Development
Best Practice Project
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DISCUSSION:

1) Does the regulatory framework at Commonwealth and State levels allow scope for intervention at the local level to achieve operational waste objectives?  
2) Is the LEP/DCP an appropriate place for regulation regarding operational waste?  
3) Do existing provisions meet Council’s goals and objectives regarding operational waste? In all zones? For all development types?

STAGE 1 – CONCLUSION

STAGE 2 – BEST PRACTICE LOCAL AUTHORITY INITIATIVES

LOCAL AUTHORITY INITIATIVES IN OPERATIONAL WASTE – NSW  
LOCAL AUTHORITY INITIATIVES IN OPERATIONAL WASTE – INTERSTATE & OVERSEAS  
DISCUSSION:

1) How have local authorities in NSW, other States and Territories and overseas incorporated operational waste objectives into planning processes?  
2) What is best practice?

STAGE 2 – CONCLUSION

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RECOMMENDATIONS

APPENDIX A
Site Waste Minimisation and Management Plan Template

APPENDIX B
Model ‘Waste Not’ Development Control Plan
The project aims to locate North Sydney’s regulation of development relative to ESD best practice. The project also aims to outline actions that will lead to the achievement of best practice. Council staff have therefore worked to identify, or develop, provisions that will improve the sustainability performance of new developments compared to current practice in order to assist Council in meeting its 2020 Vision objectives. The project has involved five areas of research:

• Energy;
• Water;
• Waste;
• Biodiversity; and
• Transport.

While Council draws much of its power and responsibilities from the Local Government Act 1993, this project is primarily concerned with the development and building regulatory functions given to Council via the Environmental Planning and Assessment Act 1979 (EP&A Act). Of specific interest is Council’s ability under Part 3 of the EP&A Act to influence the content of Local Environmental Plans (LEPs) and to prepare accompanying development control plans (DCPs) as well as Council’s role under Part 4 of the EP&A Act in development assessment and control.

Each of the above sustainability research areas were approached using a three stage process:

1. A review of the existing Commonwealth, State and local regulatory environment – to establish the legal powers available to Council to influence outcomes through new or amended planning provisions and to state how Council is currently utilising these powers;

2. A review of relevant provisions contained in planning documents from other local authorities – to identify how other jurisdictions have incorporated sustainability objectives into planning documents and to identify ‘best practice’ provisions and processes;

3. A review of North Sydney draft LEP 2012 and draft DCP 2012 provisions against ‘best practice’ – to establish recommendations that will ensure best practice ESD regulation is applied to the assessment of new development in North Sydney.

Each stage of work is accompanied by a set of questions and answers relevant to the objective of each stage.

North Sydney draft LEP 2012 and draft DCP 2012 (2012 exhibition versions) were used for this project on the expectation that they will come into force in the near future. Should their coming into force be delayed beyond the completion of this project, many of the recommendations remain relevant and should form the basis of amendments to North Sydney LEP 2001 and DCP 2002.

Each area of research was coordinated by North Sydney Council staff with relevant expertise in the area. While research was undertaken according to the needs of each research area, the final recommendations were assessed by strategic planning staff to ensure compatibility with the overall planning and assessment framework.
WASTE - INTRODUCTION

Waste and resource consumption is a major environmental issue and a priority for all levels of government within Australia. This is particularly the case as landfill disposal capacity become scarce and the environmental and economic costs of waste generation and disposal rise. Sustainable resource management and waste minimisation has emerged as a priority action area and a key in the quest for Ecologically Sustainable Development (ESD).

The waste section of the ESD Best Practice Project aims to identify or develop provisions that will drive improvements in waste management in new developments compared to current practice. To assist this process the generation and management of demolition and construction waste has been examined separately to operational (post construction) waste.

Therefore the two subsections within the waste section are;

- Construction and Demolition (C&D) Waste; and
- Operational Waste.

NORTH SYDNEY COUNCIL STRATEGIC VISION AND GOALS

The Community Strategic Plan (2020 Vision) and Delivery Program provides direction for sustainable resource management and waste minimisation as follows:

**Direction 1: Our Living Environment Goal:**

1.3. Improve North Sydney’s environmental footprint and encourage responsible use of natural resources;
1.3.1 To effectively communicate and promote sustainable energy, water and waste practices to the community;
1.3.1.8 Ensure that sustainable energy water and waste management practices are included in all environmental planning and development controls;
1.3.1.8.1 Incorporate sustainable energy, water and waste management practices into LEP and DCP.

**Direction 2: Our Built Environment Goal:**

2.2. Improve mix of land use and quality development;
2.2.3.1 Promote sustainable design in future private and public development;
2.2.3.3 Encourage refurbishment of existing buildings for better environmental performance.

The aim of Councils waste avoidance and resource recovery programs which incorporates the coordination of community education and delivery of collection and processing services in line with 2020 Vision goals are:

- To facilitate and lead sustainable waste management within the LGA in a manner consistent with the principles of ESD;
- To meet and surpass the resource recovery targets set out in the WARR Act Strategy;
- To comply with the waste performance and sustainability standards set by the State Government;
- To meet the waste management needs of the residential and wider community; and
- To minimise the overall environmental impacts of waste.
Stage 1 involved a review of the Federal, State & local regulatory/policy framework relevant to demolition and construction waste management and how this impacts Council’s ability to influence waste management and minimisation through the planning and assessment system.

CONSTRUCTION AND DEMOLITION (C&D) WASTE – COMMONWEALTH

The Federal Government possesses very limited authority to introduce legislation for waste management and resource recovery in general because this has been the domain of the States. However, the role of the Commonwealth in waste policy is evolving.

In November 2009, the Environment Protection and Heritage Council endorsed the National Waste Policy. The policy identifies a range of issues needing attention. One of which is construction and demolition (C&D) waste. The aim is to achieve major improvements in waste avoidance and reuse of key materials through government encouragement of best practice in waste management and resource recovery of C&D projects. The focus will be on improving markets for recovered construction and demolition waste. The strategies on how this will be achieved have not yet been developed.

The push to improving markets for recycled construction and demolition materials will affect resource recovery rates. Rates are highest in those regions where there is strong market demand for recycled C&D materials, with well-defined and well-publicised specifications supporting the use of recycled products. Enforcement of development provisions requiring the use of recycled materials in construction and demolition projects is a lot easier if strong markets are available.

A price on carbon

The waste management industry has been impacted by the Carbon Pricing Mechanism. Under the Commonwealth Government’s Clean Energy legislation all landfills with total annual greenhouse gas emissions greater than 25,000 tonnes of carbon dioxide equivalent (CO2-e) must pay the carbon price on emissions from waste received from 1 July 2012. It means that the cost of landfilling waste has increased as landfill operators pass the tax on to users, thereby providing further incentive to avoid the creation of waste.

Building Code of Australia

The Building Code of Australia (BCA) is produced and maintained by the Australian Building Codes Board (ABCB) on behalf of the Australian Government and State and Territory Governments. The goal of the BCA is to enable the achievement of nationally consistent, minimum standards of relevant health, safety, amenity and sustainability objectives. The BCA contains technical provisions for the design and construction of buildings and other structures, covering such matters as structure, fire resistance, access and egress, services and equipment, and energy efficiency as well as certain aspects of health and amenity including garbage storage areas.

It does not contain provisions that deal with the minimisation and recycling of C&D waste.

CONSTRUCTION AND DEMOLITION (C&D) WASTE – STATE (NSW)

The focus of the State Government in managing waste is to provide a clear and consistent regulatory and policy framework that minimises harm to the environment and encourages waste avoidance and resource recovery. This framework uses a mix of legislative, policy, educative and economic tools such as the Waste Improvement Sustainability Payment (WaSIP). Councils waste minimisation and management programs are developed in response to this framework.

There are State Government policies that set resource recovery targets for the Municipal, Commercial, Construction and Demolition Sectors. In Sydney, municipal waste accounts for 26% of waste disposed to landfill, construction waste is 27%, and commercial waste accounts for 47%.
Table 1 (right) shows that the Sydney Metropolitan Area (SMA) is making steady progress on its resource recovery rates for construction and demolition waste stream towards the recycling targets in the NSW Waste Avoidance and Resource Recovery Strategy (discussed later on).

There are opportunities for recovery of C&D materials currently lost to landfill in NSW including concrete, clay products, timbers and soils.

**Protection of the Environment Operations Act 1997**

There are regulatory mechanisms set out in state legislation which help drive waste avoidance and resource recovery by providing an economic incentive such as the waste and environment levy. The *Protection of the Environment Operations Act 1997* (POEO Act) requires licensed waste facilities in NSW to pay a contribution in respect of each tonne of waste received for disposal at the facility. The levy aims to reduce the amount of waste being disposed of, and promote recycling and resource recovery and stimulate investment and innovation in resource recovery technologies.

The NSW waste regulatory framework is established under this principal legislation. The key objective is to ensure a healthy and clean environment by regulating pollution and other adverse environmental impacts that may result from waste activities.

It uses innovative tools and programs to mitigate pollution from waste disposal, minimise resource use, improve resource recovery and ensure the appropriate disposal of harmful waste in NSW such as asbestos from C&D waste.

The Environmental Protection Authority (EPA) maintains the integrity of the NSW waste regulatory framework by actively working on enforcement, education and compliance programs to promote resource recovery and combat illegal dumping and inappropriate disposal of waste.

Council has an obligation to enforce the provisions that deal with pollution incidents such as the illegal disposal of C&D waste.


The WARR Act promotes waste avoidance and resource recovery by developing waste avoidance and resource recovery strategies and programs.


The current recovery rate of C&D waste from the Sydney Metropolitan Area (SMA) is about 74%. Recovery rates will vary as the quantity of C&D waste generated from demolition and construction activity changes due to economic cycles.

The primary driver for increased recycling of C&D materials is the Waste and Environment Levy. This has made it increasingly economic to recycle rather than dispose of C&D materials. As the levy increases it should help drive improved recovery in these areas however, as the cost increases the resource recovery benefits must be balanced against the increased potential for illegal dumping.

**Contaminated Land Management Act 1997**

The objectives of this Act are:

(a) to set out accountabilities for managing contamination if the EPA considers the contamination is significant enough to require regulation under Division 2 of Part 3;

(b) to set out the role of the EPA in the assessment of contamination and the supervision of the investigation and management of contaminated sites;

(c) to provide for the accreditation of site auditors of contaminated land to ensure appropriate standards of auditing in the management of contaminated land; and

| TABLE 1: SMA RESOURCE RECOVERY RATES |
|-----------------|-------|-------|-------|-------|-------|
| Sector          | 2002/03 | 2004/05 | 2006/07 | 2008/09 | 2014 Target |
| Municipal       | 33%    | 37%    | 42%    | 51%    | 66%   |
| Commercial      | 33%    | 35%    | 42%    | 50%    | 63%   |
| Construction & Demolition | 68%    | 66%    | 70%    | 77%    | 76%   |
(d) to ensure that contaminated land is managed with regard to the principles of ecologically sustainable development.

**Protection of the Environment Operations (Waste) Regulation 2005**

The Protection of the Environment Operations (Waste) Regulation 2005 introduced a mechanism for recognising genuine resource recovery in NSW. The Regulation also sets out provisions covering the way waste is managed in terms of storage and transportation as well as reporting and record keeping requirements for waste facilities. The Regulation also makes special requirements relating to asbestos and clinical waste.

**Waste and Sustainability Improvement Payment (WaSiP)**

The WaSiP Scheme is described in Part 5A of the current version of the Protection of the Environment Operations (Waste) Regulation 2005.

Through the current WaSiP Program the NSW Government have invested some $256 million to assist councils in the regulated area to invest in actions and on programs that will improve waste avoidance, resource recovery, the use of secondary resources and waste management outcomes, and that will deliver improvements in environmental sustainability across their local government area.

To be eligible to receive a Waste and Sustainability Improvement Payment councils in the regulated area (SMA/ERA/RRA) are required to commit to meeting both the ongoing and current year’s WaSiP Standards. The WaSiP Standards are progressively updated in consultation with an Advisory Group and the Local Government and Shires Associations. The WaSiP Standards are cumulative. Councils not meeting the Standards in any given year will not be eligible for the Waste and Sustainability Improvement Payment in that year, nor future years, until all Standards (both new and ongoing) have been met.

One of the standards is the development and implementation of a Waste Not DCP aimed at recovering resources and minimising and managing waste from C&D projects and ongoing use of the site/premises. A ‘Waste Not’ DCP or policy provides a mechanism for councils to consider waste minimisation and resource recovery at the development application stage. This includes consideration of demolition and construction waste and the provision of facilities and services to allow the on-going separation, storage and removal of recyclables and waste materials. The format of the mechanism will vary from council to council with some councils providing detailed information within the DCP while others electing to put principles and objectives within the DCP and reference supporting technical documents.

However, it is not a requirement of the WaSiP Program to include all of the elements of the model document. For the purposes of the Waste and Sustainability Improvement Payments Program the minimum elements for a Waste Not DCP or policy of similar nature that must be included are:

- a requirement for submission of a waste management plan detailing the amount of demolition and construction waste likely to be generated and how these materials are to be sorted and dealt with;
- a requirement for the on site retention of demolition and construction waste dockets to confirm which facility received the material for recycling and disposal; and
- consideration of the facilities required for the post completion ongoing operation of recycling and waste management services.

The provisions in North Sydney Councils current DCP relating to waste management incorporate all of the above requirements. Individual provisions are discussed later on.

A key component of the Model Waste Not Development Control Plan (DCP) includes the requirement of developers to submit a Site Waste Minimisation and Management Plan (SWMMP) as part of the Statement of Environmental Effects (SEE) showing estimates of waste generation during demolition, construction and on-going use of the site as well as details on how these wastes will be sorted, stored and removed for recycling and/or disposal. The SWMMP template provided in the Model Waste Not DCP is available in Appendix 1.

Additionally, an excerpt of the Model Waste Not DCP which relates to C&D Waste is provided in Appendix 2. It is not the complete or whole document.
ESD Best Practice Project – WASTE

**OHS Regulations 2001/Workcover NSW**

This legislation requires operators to be licensed for the removal of contaminated C&D waste such as asbestos. The handling and storage of asbestos waste at worksites is regulated solely by WorkCover NSW under the current provisions of the Occupational Health and Safety Regulation 2001 (OH&S Regulation).

The storage, disposal and transport of asbestos waste at non-worksites is regulated by the Environmental Protection Authority (EPA) and local councils where they are the Appropriate Regulatory Authority (ARA) under the Protection of the Environment Operations (Waste) Regulation 2005.

Clean-up notices and prevention notices can also be issued by EPA and councils, where they are the ARA under the Protection of the Environment Operations Act 1997, to address pollution incidents at premises where asbestos fibres have been mobilised or asbestos waste has been handled in an environmentally unsatisfactory manner.

**SEPP 65 – Design Quality of Residential Flat Development**

Requires efficient use of natural resources, energy and water throughout its full life cycle, including construction, including aspects such as demolition of existing structures, recycling of materials, selection of appropriate and sustainable materials, adaptability and reuse of buildings, layouts and built form.

**SEPP 55 - Remediation of Land**

The object of this Policy is to provide for a statewide planning approach to the remediation of contaminated land. In particular, this Policy aims to promote the remediation of contaminated land for the purpose of reducing the risk of harm to human health or any other aspect of the environment. The DoPs Guidelines for Managing Land Contamination is used in association with this SEPP.
Councils initiatives in supporting waste reduction in the construction sector include the adoption of the State Government produced ‘Waste not DCP Model’ into Councils DCP provisions.

The general objectives and provisions of Section 19 of the Draft Development Control Plan (DDCP) (the core DDCP section relating to waste) reflect the goals set in the 2020 Vision. Table 2 shows all provisions related to C&D waste and which section they apply.

### Table 2: North Sydney Draft DCP 2012 – Construction & Demolition Waste

<table>
<thead>
<tr>
<th>Objectives/Provisions</th>
<th>01 Residential development</th>
<th>02 Commercial &amp; mixed use</th>
<th>03 Non-residential development in residential zone</th>
<th>14 Contamination &amp; hazardous building materials</th>
<th>19 Waste minimisation &amp; management</th>
</tr>
</thead>
<tbody>
<tr>
<td>S19.2 Demolition Waste</td>
<td></td>
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<td>X</td>
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<tr>
<td>07 To ensure that the reuse and recycling of demolition materials is maximised</td>
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<td>X</td>
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<tr>
<td>P1 Waste Management Plan (WMP) must accompany all DAs involving demolition. The WMP must provide details of all onsite sorting areas, storage areas and vehicular access.</td>
<td></td>
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<td>X</td>
</tr>
<tr>
<td>P2 Section 1 of the WMP must be completed providing the following details:</td>
<td></td>
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<td>X</td>
</tr>
<tr>
<td>(a) The volume and type of waste to be generated, including excavation materials, greenwaste, brick, concrete, timber, plasterboard and metals</td>
<td></td>
<td></td>
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<tr>
<td>(b) How waste is to be stored, separated and treated on site</td>
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<tr>
<td>(c) How residual waste is to be disposed of (how will this be monitored incl provision that evidence such as weighbridge dockets and invoices for waste disposal or recycling services are retained) refundable cashbond?</td>
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<tr>
<td><strong>S19.3 Construction Waste</strong></td>
<td></td>
<td></td>
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<td></td>
<td>X</td>
</tr>
<tr>
<td>01 Waste generation is minimised and reuse and recycling of construction materials is maximised in construction projects</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td><strong>P1 Waste Management Plan (WMP) must accompany all DAs involving construction. The WMP must provide details of all onsite sorting areas, storage areas and vehicular access.</strong></td>
<td></td>
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</tbody>
</table>
**TABLE 2: NORTH SYDNEY DRAFT DCP 2012 – CONSTRUCTION & DEMOLITION WASTE**

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<th>19 Waste minimisation &amp; management</th>
</tr>
</thead>
</table>
| P3 To ensure construction waste is minimised consideration should be given to the following matters  
(a) Order the correct quantities of materials  
(b) Prefabricate materials where possible  
(c) Reuse formwork  
(d) Use modular construction and basic design to reduce the need for offcuts  
(e) Separate offcuts to facilitate reuse resale recycling  
(f) Minimise site disturbance limit unnecessary excavation  
(g) Reuse or recycle materials from demolished buildings  
(h) Choose landscaping which reduces greenwaste  
(i) Coordinate and sequence trades people | | | | X | |

2.6.6 & 3.5.6 Waste Management & Minimisation

<table>
<thead>
<tr>
<th></th>
<th>01</th>
<th>02</th>
</tr>
</thead>
<tbody>
<tr>
<td>01 to minimise material usage and waste during construction, demolition</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>02 to minimise the level of waste during operation reduce new building material usage and minimise volume of demolition materials</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>P1 a WMP for the demolition, construction and operation of the building must be provided in accordance with section 19 waste management</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>P2 the building should be designed to encourage waste minimisation</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>P3 adequate recycling systems must be provided in the design of the garbage room</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>P4 materials with long lives and low maintenance needs are encouraged to be incorporated</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>P5 Contractors should be educated about the waste objectives of the development</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>
TABLE 2: NORTH SYDNEY DRAFT DCP 2012 – CONSTRUCTION & DEMOLITION WASTE

<table>
<thead>
<tr>
<th>Objectives/Provisions</th>
<th>Applicable DDCP Sections</th>
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</thead>
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<tr>
<td>01 Residential development</td>
<td>02 Commercial &amp; mixed use 03 Non-residential development in residential zone 14 Contamination &amp; hazardous building materials 19 Waste minimisation &amp; management</td>
</tr>
<tr>
<td>P6 The storage of any hazardous waste materials must be adequately secured</td>
<td>X X</td>
</tr>
<tr>
<td>2.6.9 Adaptive Reuse of buildings</td>
<td>X X</td>
</tr>
<tr>
<td>01 To encourage the adaption and reuse of buildings</td>
<td>X X</td>
</tr>
<tr>
<td>P1 Where feasible, existing buildings are to be reused in preference to demolition</td>
<td>X X</td>
</tr>
<tr>
<td>P2 Buildings should be designed to encourage adaptable office floorspace to accommodate changing occupier requirements</td>
<td>X X</td>
</tr>
<tr>
<td>2.6.8 &amp; 3.5.8 Building Materials</td>
<td>X X</td>
</tr>
<tr>
<td>01 To encourage the use of materials which have a low environmental impact during their life cycle</td>
<td>X X</td>
</tr>
<tr>
<td>02 To encourage the use of toxin free material to minimise the health impact of materials used indoors</td>
<td>X X</td>
</tr>
<tr>
<td>P1 Products with the least life cycle impact should be favoured</td>
<td>X X</td>
</tr>
</tbody>
</table>
### Table 2: North Sydney Draft DCP 2012 – Construction & Demolition Waste

<table>
<thead>
<tr>
<th>Applicable DDCP Sections</th>
<th>Objectives/Provisions</th>
<th>P14 Any removal of contaminated solids from the site must comply with relevant laws for the transportation, treatment and disposal of waste materials. Waste materials must not be disposed of on land without:</th>
</tr>
</thead>
<tbody>
<tr>
<td>01 Residential development</td>
<td>The use of the following types of building materials are to be maximised wherever possible:</td>
<td>(a) copper, chrome, cadmium, lead, mercury, cyanide and formaldehyde, and adhesives containing PVC.</td>
</tr>
<tr>
<td>02 Commercial &amp; mixed use</td>
<td>(a) materials which are durable</td>
<td>(b) materials with a low embodied energy content</td>
</tr>
<tr>
<td>03 Non-residential development</td>
<td>(b) locally manufactured materials and produced</td>
<td>(c) salvaged and/or recycled materials</td>
</tr>
<tr>
<td>11 Contamination &amp; hazardous building materials</td>
<td>(c) materials with a high recycled content (&gt;50%)</td>
<td>(d) salvaged and/or recycled materials</td>
</tr>
<tr>
<td>14 Waste minimisation &amp; management</td>
<td>(d) salvaged and/or recycled materials</td>
<td>(e) low volatile organic compound (VOC) emitting materials</td>
</tr>
<tr>
<td>19 Waste minimisation &amp; management</td>
<td>(e) timber used be obtained from certified sustainable sources</td>
<td>(f) materials with a high recycled content (&gt;50%)</td>
</tr>
<tr>
<td>30 Construction &amp; demolition waste</td>
<td>(f) low volatile organic compound (VOC) emitting materials</td>
<td>(g) use mechanical fixings instead of adhesives and glues, wherever possible</td>
</tr>
<tr>
<td>5.14.2.4 – Site Management Requirements</td>
<td>(g) low volatile organic compound (VOC) emitting materials</td>
<td>(h) when using Medium Density Fibreboard, ensure that it has a low formaldehyde content</td>
</tr>
<tr>
<td></td>
<td>(h) when using Medium Density Fibreboard, ensure that it has a low formaldehyde content</td>
<td>(i) use toxin-free floor finishes</td>
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<td></td>
<td>(i) use toxin-free floor finishes</td>
<td>(j) use toxin-free floor finishes</td>
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DISCUSSION:

1. Does the regulatory framework at Federal and State levels allow scope for intervention at the local level to achieve demolition and construction waste objectives?

At present the Federal government currently has no legislation or direction to guide Councils in their planning approvals process in the context of waste minimisation and management of C&D waste. However the National Waste Policy will set out strategies that deal with, among other things, C&D waste. The bulk of regulation regarding C&D waste occurs at the State Government level via specific Acts and Regulations such as Waste Avoidance and Resource Recovery Act 2001 (WARR ACT) and the Protection of the Environment Operations (Waste) Regulation 2005. SEPP 55 and SEPP 65 also provide regulation regarding waste management of C&D stages. However the state regulations, particularly WaSiP via the Protection of the Environment Operations (Waste) Regulation 2005, explicitly provide enabling provisions allowing regulation at the local level via DCPs therefore there is scope for intervention at the local level to achieve demolition and construction waste objectives through the application of appropriate DCP provisions relevant to C&D waste across all development types.

In terms of the safe management of contamination and hazardous building materials, this is mandated under the POE Act, OHS Regulations and Workcover requirements, SEPP55 and associated Contaminated Land regulatory framework. The legislation deals adequately with hazardous waste and there is limited scope for improvement in the existing planning provisions that relate this type of waste. In this regard the aim of Section 14 of DDCP in this instance is to inform the applicant of the regulatory framework they are required to comply with.

2. Is the LEP/DCP an appropriate place for regulation regarding waste created during demolition and construction?

Yes. As discussed above state based regulation regarding C&D waste explicitly endorse DCPs as an appropriate place for the regulation of C&D waste at the local level.

3. Do existing demolition and construction waste provisions meet Council’s goals and objectives regarding waste? In all zones? For all development types?

The need for a WMP that deals with C&D waste applies to non-residential and mixed use developments via Sections 2 and 3 of the draft DCP. The need for a WMP for C&D waste should also arguably apply to all residential development or this sector risks being unregulated on this issue.

The effectiveness of the existing provisions across all the above development types is dependent on how well they are monitored and policed during the development and construction stage. If monitored effectively, then the existing provisions will meet Councils goals and objectives for waste.

STAGE 1 – CONCLUSION

The regulatory framework at Federal and State levels allows scope for intervention at the local level to achieve demolition and construction waste objectives. There are no regulatory requirements that restrict Councils ability to influence construction and demolition waste management and minimisation outcomes through the use of planning instruments.

Councils existing DDCP provisions relating to C&D waste are based on the Waste Not DCP model developed by the Environmental Protection Authority (EPA) as part of the State Governments Waste and Sustainability Improvement Program payment incentive scheme. According to the EPA, this document demonstrates current best practice. Most of the recommended provisions in the model DCP are incorporated in the current DDCP.

In any case the adoption of the Waste Not DCP is not a legislative requirement, it is one of many standards that Councils are required to meet in order to qualify for the annual WaSiP payment, which is an economic incentive tool to drive improvements in waste avoidance and resource recovery. There is scope to intervene at the local level to further improve existing provisions.

In terms of Section 14 of the DDCP the safe management of contamination and hazardous building materials, the POE Act, OHS Regulations and Workcover requirements, SEPP55 and associated Contaminated Land
The regulatory framework have rigorous requirements that deal with these types of waste.

There is limited scope for intervention at the local level in this regard and so the aim of Section 14 of DDCP in this instance would be to inform the applicant of the regulatory framework they are required to comply with. LEPs and DCPs cannot include any further provisions relating to the DDCP for Contamination and Hazardous Building Materials.
CONSTRUCTION AND DEMOLITION WASTE

STAGE 2 – BEST PRACTICE LOCAL AUTHORITY INITIATIVES

This section explores how other authorities have incorporated resource recovery objectives into planning documents. This is done to identify best practice planning provisions and processes.

LOCAL AUTHORITY INITIATIVES IN C&D WASTE – NSW

Comparisons of the DCPs of Sydney Metropolitan Area (SMA) Councils of waste management and minimisation related provisions for C&D waste was undertaken with a view to identify best practice provisions and processes.

The Councils specifically reviewed were:

- City of Sydney (CoS) DCP 2012;
- Willoughby DCP 2006;
- Paramatta DCP 2011;
- Newcastle DCP 2005/draft DCP 2011;
- Ryde DCP 2010;
- Wollongong DCP 2009; and
- Waverley DCP 2010.

These Councils were selected because of their substantial amount of non residential floor space.

The exercise identified consistencies across all of the DCPs reviewed. This is not surprising considering the DCP provisions for waste management are based on the State Governments Waste Not DCP Model.

This model incorporates Best Practice and is used by most NSW Councils including North Sydney.

The ‘Waste Not’ DCP is a mechanism for councils to consider waste minimisation and resource recovery at the demolition and construction stage as well as the provision of facilities and services to allow the on-going separation, storage and removal of recyclables and waste materials.

All of the above Councils included the following essential elements in their DCP:

- a requirement for submission of a waste management plan detailing the amount of demolition and construction waste likely to be generated and how these materials are to be sorted and dealt with;
- a requirement for the on site retention of demolition and construction waste dockets to confirm which facility received the material for recycling and disposal; and
- consideration of the facilities required for the post completion ongoing operation of recycling and waste management services.

North Sydney Councils current DDCP for waste management incorporates all of the above elements. Councils, including North Sydney, aim to encourage and provide guidance on building designs, construction and demolition techniques in general which minimise waste generation however there are no prescribed targets incorporated in any of the DCPs reviewed except for the City of Sydney (CoS).

CoS’s DCP is based on the Waste Not DCP model document but further sets prescribed waste avoidance and resource recovery targets. For new buildings and renovations CoS requires the total percentage (by weight) of construction and demolition waste (for example, bricks, concrete, roof tiles) that is reused on site or diverted for reuse or recycling to be at least 80%, with receipts sufficient to demonstrate that the target will be achieved. However this practice is not widely supported by the building and construction industry due to economic reasons and poor supply of quality materials.

LOCAL AUTHORITY INITIATIVES IN C&D WASTE – INTERSTATE

City of Melbourne

The City of Melbourne Planning Scheme requires developers and builders to submit a construction management plan (CMP) that takes into account all relevant aspects of demolition or building work including waste and materials re-use. Council has the power to ask for CMPs under the Activities Local Law 1999. For the duration of the construction phase an approved CMP is deemed to be an Environmental Management Plan pursuant to the requirements of the Environment Local Law 1999.
The City of Melbourne may require a Security Deposit to be provided in relation to a CMP. In the event of non-compliance with the approved CMP, City of Melbourne reserves the right to draw from the deposit to achieve adequate rectification.

Applicants must develop a CMP, detailing the following:

- Efforts to minimise waste on site by avoiding over-estimation of purchasing requirements, minimising packaging materials, and buying environmentally approved and recycled content products;
- Procedures for the collection and sorting of recyclable construction materials;
- The type and quantity of materials that are to be re-used or recycled;
- Provision of containers for recyclable materials including cardboard, glass, metal, and plastic; and green waste;
- The re-use of timber, glass and other materials;
- The recycling of asphalt, metal, bricks, tiles, masonry, concrete, plasterboard, plastic, batteries, cardboard, carpet and other materials;
- Provisions for collection of daily rubbish from workers;
- Procedures for removal of waste (materials that cannot be reused or recycled) from the site;
- Procedures for removal of hazardous or dangerous materials from the site.

City of Adelaide

Adelaide City Development Plan 2011 encourages development which supports high local environmental quality, promotes waste minimisation, re-use and recycling.

Controls are as follows;

- A dedicated area for on-site collection and sorting of recyclable materials and refuse should be provided within all new development;
- A dedicated area for the collection and sorting of construction waste and the recycling of building materials during construction as appropriate to the size and nature of the development should be provided and screened from public view;
- Development greater than 2000 square metres of total floor area should manage waste by:
  - containing a dedicated area for the collection and sorting of construction waste; and
  - recycling building materials;
  - on-site storage and management of waste; and
  - disposal of non-recyclable waste.

City of Hobart

City of Hobart’s Planning Scheme has no specific requirements for C&D waste avoidance and minimisation other than the following broad provision:

- Requirements regarding any matter affecting probable effects upon energy consumption, microclimate, or the prevention of environmental pollution by waste matter or noise, may be imposed as conditions for approval of any new or changed use or development of land and buildings.

DISCUSSION:

1. How have local authorities in NSW and other states and territories and overseas incorporated C&D waste objectives into planning processes?

The local authorities in NSW have incorporated the State Governments Waste NOT DCP Model into their DCPs for C&D waste management as well as operational waste. Many councils, especially those in metropolitan Sydney have used this document as a basis to develop locally relevant development control plans or policies as it is regarded as Best Practice and is a standard required to be met to qualify for a payment under the WaSiP program.

The intent of the local authority DCPs are to encourage and provide guidance on building designs, construction and demolition techniques in general which minimise waste generation. By and large there are no prescribed numerical targets incorporated in the provisions. The concern with setting a target is what happens if it cannot be met. A performance standard is likely to be more effective at maximising recycling and reuse opportunities over a numerical target, because they can be tailored to the requirements of the site and project.

Interstate authorities have incorporated resource recovery objectives for C&D waste in their respective planning controls. However no provisions were identified in the City of Perth,
Brisbane and Hobart Councils planning instruments.

2. What is best practice?
The State Governments Waste Not DCP Model can be considered as ‘best practice’. This model has been widely adopted across NSW Councils. A “Waste Not... A Model Development Control Plan and Local Approvals Policy” was first developed by the Combined Sydney Regional Organisation of Councils in 1996.

The Model Waste Not DCP draws on this local government experience and incorporates current best practices and aims to facilitate sustainable waste management within Local Government Areas in a manner consistent with the principles of ESD.

STAGE 2 – CONCLUSION
Stage 2 involved researching how other authorities, have incorporated construction and demolition waste minimisation and management objectives into planning documents. This was done to identify best practice planning provisions and processes.

Authorities included:
- SMA Councils
- City of Melbourne
- City of Brisbane
- City of Perth
- City of Adelaide
- City of Hobart

Councils with similar characteristics to North Sydney were selected for this exercise particularly those with a large proportion of non residential floorspace including City of Sydney, Willoughby City Council, Paramatta City Council, Newcastle City Council, Ryde City Council, Wollongong City Council, Waverley City Council.

The exercise identified consistencies across all of the NSW Councils DCP waste related provisions for C&D waste. This is not surprising considering the DCP provisions of all Councils are based on the Environment Protection Authority (EPA) Waste Not DCP Model.

This model incorporates Best Practice and is used by most NSW Councils including North Sydney, because it meets one of the standards required to qualify for the annual Waste and Sustainability Improvement Payment Scheme (WaSiP) administered by EPA.

Councils typically aim to encourage and provide guidance on building designs, construction and demolition techniques in general which minimise waste generation however there are no prescribed targets incorporated in the provisions except for in City Of Sydney.
CONSTRUCTION AND DEMOLITION WASTE

STAGE 3 – REVIEWS AND RECOMMENDATIONS

A review of the DCPs of NSW and interstate Councils was undertaken with a view to identify and develop new or enhanced provisions that will drive improvements in waste efficiency of C & D and operational waste compared to the current provisions that are applied in North Sydney. Councils that have similar characteristics as North Sydney, were selected for this exercise specifically those with large proportion of non residential floorspace.

The exercise identified consistencies across the DCPs of the Councils reviewed. This is not surprising considering the DCP provisions are based on the Waste Not DCP Model.

The model incorporates Best Practice and is used by most NSW Councils including North Sydney, because it meets one of the standards required to qualify for payment under the WaSiP program. Of note is that many NSW Councils apply the requirement for a WMP across all land uses. North Sydney only applies the requirement to non-residential development.

The intent of local authority DCPs are to encourage and provide guidance on building designs, construction and demolition techniques in general which minimise waste generation. On the whole there are no prescribed targets incorporated in the provisions reviewed. The concern with setting a target is what happens if it cannot be met. A performance standard is likely to be more effective at maximising recycling and reuse opportunities over a numerical target, because they can be tailored to the requirements of the site and the project.

In the case of City of Sydney DCP2012, which is also based on the Waste Not Model document, new buildings and renovations, are required to reuse or recycle at least 80% of C&D waste. However this practice is not widely supported by the building and construction industry due to economic reasons and poor supply of quality materials.

Competitive markets for recycled content materials are limited particularly for reasons of safety and durability. There are no markets for second hand plaster and frames. Cost factor is also a barrier. Recycling C&D waste is not generally cheaper than landfilling because more bins are required for separation which raises increased skip costs and secondly, C&D waste is usually charged on a volume basis ($/m³), not by weight ($/tonne) as in municipal or domestic waste. The other concern of developers is with site constraints where space limitations work against effective source separation.

Generally if the overall objectives of resource recovery are identified and addressed by the applicant (developer/builder) there should be no requirement to set recycling and reuse targets.

RECOMMENDATIONS

1. It is recommended that the requirement for a Waste Management Plan dealing with C&D waste be inserted in Section 1 – Residential Development of draft DCP2012 so as to ensure consistent application of C&D waste regulation across all land uses.
Stage 1 involved a review of the Federal, State and local regulatory/policy framework relevant to operational waste management and how this impacts Council’s ability to influence waste management and minimisation through the planning and assessment system.

**OPERATIONAL WASTE - COMMONWEALTH**

The Commonwealth Government possesses very limited authority to introduce national legislation for waste management and resource recovery in general. Individual State and territory jurisdictions are the primary administrators of waste management and resource recovery. However, the role of the Commonwealth in waste policy is evolving.

In November 2009, the Environment Protection and Heritage Council (EPHC) endorsed the National Waste Policy: Less waste, more resources (the NWP). The policy identifies a range of issues needing attention however there are no mandatory requirements that will impact on waste avoidance and resource recovery initiatives post construction.

**National Australian Built Environmental Rating Scheme (NABERS)**

A rating tool that is being increasingly used in the assessment of new developments, NABERS is a voluntary environmental rating system for office premises. It is tailored for use by building owners, managers, and building occupants. Building owners and managers are able to report on those aspects of the environmental performance of the building that are in their control including waste generation.

A NABERS Waste rating:

- Provides market recognition and a competitive advantage for buildings with low waste generation and high recycling rates;
- Encourages best practice in the waste practices of commercial buildings to minimise waste to landfill;
- It is voluntary – a rating can be initiated by a building owner, manager or tenant;
- Rates a building from 0 to 5 stars according to its actual performance, based on a simple waste audit and is compared against the NABERS waste benchmark;
- Can be used for the base building (central services), whole building or individual tenancies; and
- Allows building owners, managers or tenants to “badge” and promote the waste and recycling performance of their office.

**A price on carbon**

The Commonwealth Government passed the Clean Energy legislation that included a Carbon Pricing Mechanism (CPM). Under the CPM operators of facilities that generate a particular level of greenhouse gas emissions must make payments for each tonne of greenhouse gas they emit from 1 July 2012.

All landfills with total annual greenhouse gas emissions greater than 25,000 tonnes of carbon dioxide equivalent (CO2-e) must pay the carbon price on emissions from waste received from 1 July 2012. It means that the cost of landfilling waste has increased as landfill operators pass this tax on to users, thereby providing an incentive to avoid the creation of waste.

**OPERATIONAL WASTE – STATE (NSW)**

**Protection of the Environment Operations Act 1997**

The POEO Act defines ‘waste’ for regulatory purposes and establishes management and licensing requirements along with offence provisions to deliver environmentally appropriate outcomes. The Act also establishes the ability to set various waste management requirements via the regulation. It also includes provisions that deal with littering offences.

**Waste Avoidance and Resource Recovery Act 2001 (WARR ACT)**

The Waste Avoidance and Resource Recovery Act 2001 promotes waste avoidance and resource recovery by developing waste avoidance and resource recovery strategies and programs, such as the extended producer responsibility scheme for...
industry. A framework for reducing waste and making better use of resources was introduced in 2003 - the NSW Waste Avoidance and Resource Recovery Strategy (WARR Strategy) - a first for Australia. It was updated in 2007.

The waste strategy:

(a) is based on continuous improvement and benchmarked against international best practice; and

(b) includes targets for waste reduction, resource recovery and the diversion of waste from landfill disposal.

The Waste Avoidance and Resource Recovery Strategy, sets a recovery target for municipal waste of 66% by 2014. North Sydney Council has achieved 66.8%.

There is no specific regulation that requires councils to meet the objectives and targets identified in the WARR Strategy, though the need to meet these targets is identified in the recently released NSW 2021 Plan.

However the WARR Act does include the following provision:

Section 14 Power to request councils to report on waste strategy compliance:

1. The Director-General may request a local council to provide the reasons for any specified non-compliance by the local council with the objectives of the current waste strategy.

2. Such a request must be in writing and must specify the date by which the local council is requested to provide the reasons to the Director-General.

Having stated that, the focus of the EPA who administer the WARR Strategy, work in partnership with local government to increase resource recovery and reduce waste to meet the targets rather than imposing regulation.

**Protection of the Environment Operations (Waste) Regulation 2005**

The Protection of the Environment Operations (Waste) Regulation 2005 introduced a mechanism for recognising genuine resource recovery in NSW.

The Regulation also sets out provisions covering the way waste is managed in terms of storage and transportation as well as reporting and record keeping requirements for waste facilities.

The Waste and Sustainability Improvement Payment Scheme is described in Part 5A of the current version of the Protection of the Environment Operations (Waste) Regulation 2005.

Through the current WaSiP Program the NSW Government have invested some $256 million to assist councils in the regulated area including North Sydney, to invest in actions and on programs that will improve waste avoidance, resource recovery, the use of secondary resources and waste management outcomes, and that will deliver improvements in environmental sustainability across their local government area. Council’s participation in the WaSiP program is voluntary.

To be eligible to receive a Waste and Sustainability Improvement Payment councils in the regulated area are required to commit to meeting both the ongoing and current year’s WaSiP Standards. The WaSiP Standards are progressively updated in consultation with an Advisory Group and the Local Government and Shires Associations. The WaSiP Standards are cumulative. Councils not meeting the Standards in any given year will not be eligible for the Waste and Sustainability Improvement Payment in that year, nor future years, until all Standards (both new and ongoing) have been met. North Sydney Council has complied with all the standards to date.

One of the standards directly applicable to the DCP review is the Waste Not DCP Requirement of which North Sydney have complied with.

A ‘Waste Not’ DCP or policy provides a mechanism for councils to consider waste minimisation and resource recovery at the development application stage. This includes the provision of facilities and services to allow the on-going separation, storage and removal of recyclables and waste materials. The format of the mechanism will vary from council to council. With some councils providing detailed information within the DCP while others electing to put principles and objectives within the DCP and reference supporting technical documents.

According to the EPA, this document demonstrates current best practice. However it is not a requirement of the WaSiP Program to include all of the elements of the model document. For the purposes of the Waste and Sustainability Improvement Payments Program the minimum elements for a Waste Not DCP or policy of similar nature that must be included are:
ESD Best Practice Project – WASTE

• a requirement to address the management of demolition and construction waste;
• a requirement for submission of a waste management plan detailing the amount of demolition and construction waste likely to be generated and how these materials are to be sorted and dealt with;
• a requirement for the on site retention of demolition and construction waste dockets to confirm which facility received the material for recycling and disposal; and
• consideration of the facilities required for the post completion ongoing operation of recycling and waste management services.

All of the above provisions are incorporated in the current DDCP.

Controls/requirements of the Model Waste Not DCP that is applicable to post construction

A key component of a Waste Not DCP includes the requirement of developers to submit a plan as part of the SEE showing details on how waste will be sorted, stored and removed for recycling and/or disposal post construction. This information is required to be presented in a Site Waste Minimisation and Management Plan (SWMMP), a template of which is detailed at Appendix 1.

Additionally, an excerpt of the Model Waste Not DCP which relates to post construction is provided in Appendix 2. It is not the complete or whole document.

OPERATIONAL WASTE - LOCAL (NORTH SYDNEY COUNCIL)

The DCP plays a supporting role in helping Council meet its resource recovery objectives. Current provisions in the DCP that relate to the design of waste management facilities in residential and mixed use developments allows occupants the opportunity to source separate their waste stream as easily as possible.

Councils initiatives in supporting waste reduction at the post construction stage include the adoption of the State Government produced ‘Waste Not DCP Model’ into Councils DCP provisions. Additionally, supporting technical documents such as the ‘Waste Handling Guide for Designers and Builders of Houses, Residential and Commercial Buildings’ are provided to developers. This guide is also based on the State Government’s ‘Better Practice Guide for Waste Management in Multi-Unit Dwellings’.

The general objectives and provisions of Section 19 of the DDCP (the core DDCP relating to waste), reflect the goals set in the 2020 Vision. Table 3 shows all provisions related to operational waste and which section they apply.
<table>
<thead>
<tr>
<th>Objectives/Provisions</th>
<th>01 Residential development</th>
<th>02 Commercial development</th>
<th>03 Non-residential development in residential zone</th>
<th>14 Contamination &amp; hazardous building materials</th>
<th>19 Waste minimisation &amp; management</th>
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<tbody>
<tr>
<td><strong>S.19.4 waste facilities and management</strong></td>
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<tr>
<td>01 Design buildings to encourage waste minimisation source separation, reuse and recycling</td>
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<tr>
<td>P1 Provide appropriate space on each property for temp storage of recyclables, garbage, organics/greenwaste &amp; gen h/h cleanup materials</td>
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<td>P2 Ensure space is easily accessible from each part of the building and from the collection point</td>
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<td>P3 Include adequate access and manoeuvring space, at least an area equivalent to the combined footprint of the bins</td>
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<td>P4 Provide administrative arrangements for ongoing waste management including signage</td>
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<td>P5 Locate and design waste storage and recycling areas to complement the streetscape</td>
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<td>P6 All applications must be accompanied by plans which illustrate the location of the following:</td>
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<td>(a) A waste cupboard space</td>
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<td>(b) A waste storage and recycling area</td>
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<td>(c) A collection area</td>
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<td>(d) Access for collection vehicles</td>
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<td>(e) Location and design of communal facilities where relevant</td>
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<td>(f) Management of hazardous waste where appropriate</td>
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<td>Objectives/Provisions</td>
<td>Applicable DDCP Sections</td>
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<td>19 Waste minimisation &amp; management</td>
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<td>P7 Sections 3 &amp; 4 of the WMP must be completed for all dev. Incorporating one or more of the following uses</td>
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<td>(a) Attached dwellings</td>
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<td>(b) Multiunit housing</td>
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<td>(c) Resid flat building</td>
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<td>(d) Shop top housing</td>
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<td>(e) Commercial premises</td>
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<td>(f) Industrial premises</td>
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<td>(g) Other non resid premises</td>
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<td>P8 Sec 3 of the wmp must describe the type of waste to be generated at the premises, expected vol per week, proposed onsite storage &amp; treatment facilities destination of waste materials</td>
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<td>P9 Sec 4 of the wmp must describe the proposed ongoing management of waste and recycling</td>
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<td>P10 Council may impose conditions on a dev. Consent to encourage waste minisation and recycling as follows</td>
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<td>(a) Separate waste and recycling services should be engaged/contracted by business operating from premises</td>
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<td>(b) consider providing alternatives to plastic bags for the purposes of carrying items purchased from the premises</td>
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<td>(c) do not provide prepared food/drinks to customers in any non recyclable or non biodegradable plastic or form</td>
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<td>2.5.9 Garbage Storage</td>
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<td>P1 Communal on site waste storage recycling &amp;collection points must be provided for each development site</td>
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<tr>
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<td>Applicable DDCP Sections</td>
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<td>P8 More than one communal on site waste storage and recycling area should be provided on large or steep sites</td>
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<td>P20 Source separation must be provided within the garbage storage area to maximise recycling and reduction of waste sent to landfill</td>
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</tr>
<tr>
<td>P21 Food and drink premises and any other premises involved in the storage of perishable goods are required to:</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(a) provide specialised containment for food scraps</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(b) arrange regular/daily collection of food scraps</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(c) provide refrigerated garbage rooms where large volumes of perishables and infrequent collection is proposed</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>P28 Each dwelling must be provided with a waste cupboard within the kitchen, which is of sufficient size to hold a single days waste and to enable separation of garbage, recyclables and compost materials</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.4.9 Garbage Storage</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>P9 More than one communal on-site waste storage and recycling area should be provided on large or steep sites, or where there is more than one Council collection point.</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>P18 Source separation must be provided within the garbage storage area to maximise recycling and reduction of waste sent to landfill.</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>P19 Food and drink premises and any other premises involved in the storing of perishable goods are required to:</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(a) provide specialised containment for food scraps;</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(b) Arrange regular/daily collection of food scraps; and</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(c) Provide refrigerated garbage rooms where large volumes of perishables (such as seafood) and infrequent collection is proposed.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Objectives/Provisions</td>
<td>01 Residential development</td>
<td>02 Commercial development</td>
<td>03 Non-residential development in residential zone</td>
<td>14 Contamination &amp; hazardous building materials</td>
<td>19 Waste minimisation &amp; management</td>
</tr>
<tr>
<td>-----------------------</td>
<td>---------------------------</td>
<td>---------------------------</td>
<td>-----------------------------------------------</td>
<td>-----------------------------------------------</td>
<td>--------------------------------</td>
</tr>
<tr>
<td>S.2.6.6. &amp; S.3.5.6 Waste Management and Minimisation</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>O1 To minimise material usage and waste during building, construction and demolition.</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>O2 To minimise the level of waste during operation reduce new building material usage and minimise volume of demolition materials.</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>P1 A Waste Management Plan for the demolition, construction and operation of the building must be provided in accordance with Part B: Section 19 - Waste Management.</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>P2 The building should be designed to encourage waste minimisation (e.g. source separation, reuse and recycling).</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>P3 Adequate recycling systems must be provided in the design of the garbage room.</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>P4 Materials with long lives and low maintenance needs are encouraged to be incorporated.</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>P5 Contractors and sub-contractors employed to undertake proposed construction works and waste removal should be educated about the waste objectives of the development.</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>P6 The storage of any hazardous waste materials must be adequately secured.</td>
<td>X</td>
<td>X</td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>
In relation to minimising Council’s exposure to the waste levy (currently $82.20/tonne) Council has undertaken 2 major initiatives:

1. Implemented a source separation collection system that maximises resource recovery through provision of dedicated containers (mobile bins) for recyclables and mixed residual waste; and

2. Entered into a contract for processing of mixed residual waste to minimise waste to landfill.

**Contract 9/2010 Waste and Recycling Collection Contract**

The service specifications incorporated in the collection contract have been developed so that they are consistent with Councils general objectives for waste management and hence they are consistent with the goals of Councils 2020 Vision.

**Contract 21/2006- Waste Disposal and Processing Contract**

Councils current Alternative Waste Treatment Contract processes the residual waste collected from residential and some commercial properties through a UR-3R Facility which is a world first that uses a number of different proven technologies to provide better environmental outcomes for North Sydney’s waste.

It uses a four-stage Mechanical Biological Treatment (MBT) process that mechanically sorts the waste to remove recyclables and inert materials. It then biologically treats the organic materials such as food scraps and garden clippings. Waste is transformed into valued resources, including metals, glass, paper, green electricity and compost.

Over 50% of the waste material is recovered that otherwise would have been destined for landfill. The type of waste processing chosen by Council avoids the complication of separating food waste from the residual stream, which must be a bonus for residents when considering the difficulties experienced by other Councils that have chosen the mixed organics pathway. Council’s diligence has resulted in maximising waste diversion from landfill without causing any inconvenience to residents, business as usual at the kerbside with maximum environmental outcome obtained.

This contract together with the Councils existing waste management and minimisation programs and collection services have led to the achievement of a 66.8% resource recovery rate. This is consistent with the goals of the 2020 Vision Community Strategic Plan.

**The Better Business Partnership Program**

The Better Business Partnership is a regional project designed to improve the sustainability of businesses in the Ku-ring-gai, North Sydney and Willoughby City Council areas. Council works with businesses to save money through reduced energy and water bills and develop waste minimisation strategies, to improve their environmental performance and provide promotion and recognition of their actions. Small to medium sized businesses can take part. So far 101 businesses in the LGA have registered and have become participants. This is a voluntary program.

**DISCUSSION:**

1. Does the regulatory framework at Commonwealth and State levels allow scope for intervention at the local level to achieve operational waste objectives?

There is scope to adopt and go beyond the provisions contained in the Waste Not DCP Model. There are no restrictions placed on Council to enhance or add provisions that exceed the requirements contained in the Model document.

2. Is the LEP/DCP an appropriate place for regulation regarding waste?

Operational waste management is largely being undertaken through the waste and recycling collection contract. However DCP controls enable the allocation of accessible space on premises for the separation of waste and removal by collection contractors. It can provide residents and the wider community with the opportunity to recover resources through ensuring the design of the garbage bay handling facilities is done in a manner that makes it easy for them to recycle their waste.
3. Do existing provisions meet Council’s goals and objectives regarding waste? In all zones? For all development types?

Council’s DCP, if appropriately implemented, will help facilitate waste management and minimisation in the North Sydney area. However, it is noted that the need to submit a WMP in accordance with Section 19 is not included in section 1 – Residential Development. This could potentially result in substandard waste management practices in residential developments. There are potentially other areas for improvement including in the design and allocation of sufficient space for the collection of household cleanup materials in residential developments so that the current practice of waste deposited on the kerb for collection is addressed in new developments. Commercial and mixed use developments require clearer provisions that address on site storage of waste presented for collection. Currently, there are health and amenity issues associated with bins being presented in laneways in commercial zones. There is also the issue of environmental noise associated with the collection of garbage in mixed zones that requires a provision restricting times of collection for all development types in all zones.

Council’s Waste Not DCP can only reach its full potential if enforcements and monitoring act in a complementary fashion. Unless there is a visible and meaningful commitment to pursuing compliance, the DCP will not be given appropriate consideration by developers and builders.

STAGE 1 – CONCLUSION

The regulatory framework at Federal and State levels allows scope for intervention at the local level to achieve operational waste objectives. There are no regulatory requirements that restrict Councils’ ability to influence operational waste management and minimisation outcomes in residential and non residential developments through the use of planning instruments.

Councils existing DDCP provisions relating to post construction waste are based on the Waste Not DCP model developed by the Environmental Protection Authority (EPA) as part of the State Governments Waste and Sustainability Improvement Program payment incentive scheme. According to the EPA, this document demonstrates current best practice. Most of the recommended provisions in the model DCP are incorporated in the current DDCP.

In any case the adoption of the Waste Not DCP is not a legislative requirement, it is one of many standards that Councils are required to meet in order to qualify for the annual WaSiP payment, which is an economic incentive tool to drive improvements in waste avoidance and resource recovery. There is scope to intervene at the local level to further improve existing provisions, particularly for non residential development.

Stage 2 will seek to investigate whether North Sydney Council should seek to utilise this scope.
OPERATIONAL WASTE

STAGE 2 – BEST PRACTICE LOCAL AUTHORITY INITIATIVES

LOCAL AUTHORITY INITIATIVES IN OPERATIONAL WASTE - NSW

A review of DCPs of NSW Councils was undertaken with a view to identify best practice provisions and processes.

Councils with similar characteristics to North Sydney were selected for this exercise specifically those with large proportion of non residential floorspace including:

- City of Sydney (CoS) DCP 2012;
- Willoughby DCP 2006;
- Paramatta DCP 2011;
- Newcastle DCP 2005/draft DCP 2011;
- Ryde DCP 2010;
- Wollongong DCP 2009; and
- Waverley DCP 2010.

The exercise identified consistencies amongst all the Councils waste minimisation related provisions across all development types since all of the Councils incorporated the recommended provisions of the EPA’s Waste Not DCP Model into their DCPs.

This model incorporates Best Practice and is used by most NSW Councils including North Sydney, mainly because it meets one of the standards required to qualify for the annual Waste and Sustainability Improvement Payment Scheme (WaSiP) administered by the EPA. The Waste Not DCP Model is applied consistently across the Councils reviewed. A key component includes the requirement of developers to submit a plan as part of the SEE showing details on how waste will be sorted, stored and removed for recycling and/or disposal post construction.

The ‘Waste Not’ DCP is a mechanism for councils to consider waste minimisation and resource recovery for the provision of facilities and services to allow the on-going separation, storage and removal of recyclables and waste materials post construction. The format of the mechanism varies from council to council. With some councils providing detailed information within the DCP while others electing to put principles and objectives within the DCP and reference supporting technical documents such as the ‘Waste Handling Guide for Designers and Builders of Houses, Residential and Commercial Buildings’ in the case of North Sydney. This guide is also based on the State Government’s ‘Better Practice Guide for Waste Management in Multi-Unit Dwellings’.

Many councils, especially those in metropolitan Sydney have used this document as a basis to develop locally relevant development control plans or policies as it is regarded as Best Practice and is a standard required to be met to qualify for a payment under the WASiP program.

Further to the Waste Not DCP, City of Sydney are proposing to develop a Green Infrastructure Masterplan by considering the cost and benefits of incorporating waste infrastructure into Green Square for large scale developments that will compliment their proposed tri-generation and advanced waste treatment plants. In 2010 the City of Sydney commenced the preparation of an Alternative Waste Facility business case and an Advanced Waste Collection Master Plan. New development will be required to be consistent with the direction of these documents when available.

LOCAL AUTHORITY INITIATIVES IN OPERATIONAL WASTE - INTERSTATE & OVERSEAS

Requirements for sustainable waste management are generally rare in planning schemes. Where they do exist, they focus on the provision of adequate and accessible space for waste storage and segregation space. The review of interstate Councils showed that energy and carbon are the resources most commonly addressed in planning schemes.

Generally the focus for waste management was from the point of storage and access requirements rather than resource recovery.

City of Melbourne

Under the City of Melbourne Planning Scheme a planning permit requires a waste management plan to be submitted.
In its current form, the CoM’s ‘Guidelines for Preparing a Waste Management Plan’ has limited coverage (residential only) and uptake (CoM applications only).

While this is not a provision of the planning scheme, anecdotally, applicants are willing to produce these plans. The waste management plans focus on the functional space and hygiene requirements for developments, which are essential to enable collection and recycling. These plans are presently not explicitly aligned to the Eco City goals for resource efficiency.

For residential developments, the CoM’s guidelines for waste management plans address waste storage and vehicle access issues specific to the inner urban context of Melbourne and high density development.

CoM is looking to expand its guidelines to address other development types, including developments where building owners are likely to engage commercial waste contractors. Even where commercial contractors are used, there will be impacts of vehicle access (e.g. noise, congestion) and future changes in waste collection arrangements.

Sustainability Victoria has produced a comprehensive guide called, ‘Best Practice Guide for waste management in multi-unit developments’. The guide provides guidance on matters not fully addressed in planning controls, however it does not supersede state and local planning control requirements.

Currently, the CoM’s ‘Guidelines for preparing a waste management plan’ refers applicants to the draft of Sustainability Victoria’s publication. A waste management plan is a Council requirement for large or complex developments. For waste management, the targets proposed for office, residential, education and retail are based on good practice guidelines for space and access provision, as it is difficult to link data available at design stage to operational performance targets such as the waste eco-city goal.

City of Brisbane

The provisions in Brisbane’s City Plan are not focused on waste minimisation;

- Waste disposal and collection areas must be unobtrusive, and adverse impacts on neighbouring properties must be mitigated;
- Garbage bin storage and collection areas are located on site and are screened from view;
- For buildings of ten or more units, on-site bin storage:
  - is not located within 5m of a property boundary;
  - is located where it can be accessed by refuse collection services;
  - is located within the main building.

City of Hobart

City of Hobart’s Planning Scheme contains a broad provision;

- P.17 Requirements regarding any matter affecting probable effects upon energy consumption, microclimate, or the prevention of environmental pollution by waste matter or noise, may be imposed as conditions for approval of any new or changed use or development of land and buildings.

Overseas

Overseas Planning mechanisms are often linked to rating schemes, which address a suite of sustainability issues but not specific to a particular
resource. In the United States particularly, LEED appears to be the defacto tool for requiring and assessing sustainability performance. In the UK, over 100 local authorities require non-domestic buildings to be BREEAM certified (residential buildings are usually covered by the Code for Sustainable Homes).

Minimum targets are usually set for carbon or energy, and water, and rarely waste across most tools.

In Seoul mandatory installation of automated waste collection systems (e.g. Envac) are required above particular development thresholds. Similar requirements exist in Stockholm, Sweden and Barcelona.

The Automated Waste System involves a mechanical system which uses a vacuum to transport waste via tube network, has specific design elements which need to be considered if introduced components of the system include:

− inlets;
− pipe network;
− collection station.

Design considerations include system capacity and infrastructure requirements for the pipe system.

In the Fentai District of Beijing, China, planning provisions set site specific performance targets and technical requirements for each block - 100% waste collection and classification and a reduction in domestic waste generation to 0.8kg/p/day with 70% of domestic waste to be recycled and reused. Targets are based on modelling of whole district to meet overall targets.

**DISCUSSION:**

1. How have local authorities in NSW, other States and Territories and overseas incorporated operational waste objectives into planning processes?

The local authorities in NSW have incorporated the State Governments Waste NOT DCP Model into their DCPs for post construction operational waste management. Many councils have used this document as a basis to develop development control plans or policies as it is regarded as Best Practice and is a standard required to be met to qualify for a payment under the WASIP program.

Further to the Waste Not DCP, City of Sydney are proposing to develop a Green Infrastructure Masterplan by considering the cost and benefits of incorporating waste infrastructure into Green Square for large scale developments that will compliment their proposed tri-generation and advanced waste treatment plants.

2. What is best practice?

Best practice waste management establishes the design, provision and maintenance of services and infrastructure that enable garbage, recycling, organics and bulky waste services to be made in the best possible way to improve resource recovery.

Best practice waste management can also help maintain a development’s aesthetic appeal and efficient management. Facilities for garbage, recycling and organics are essential aspects of a building that are often overlooked or undervalued. If designed and managed properly, they are virtually invisible to the occupants.

If designed or managed poorly, they are a perpetual irritation, which can become worse as the building ages.

Planning at the design stage is essential; it can save a great deal of difficulty and inconvenience for residents, building managers, council and collectors throughout the life of the building. North Sydney’s provisions are based on the Best Practice Waste Not DCP Model developed by the EPA. The provisions in North Sydney’s DDCP are also incorporated in most NSW Councils DCPs.
STAGE 2 – CONCLUSION

Stage 2 involved researching how other authorities, both in Australia and overseas, have incorporated operational waste minimisation and management objectives into planning documents. This was done to identify best practice planning provisions and processes.

Authorities included:
- SMA Councils;
- City of Melbourne;
- City of Brisbane;
- City of Perth;
- City of Adelaide;
- City of Hobart;
- Seoul, Korea; and
- Fentai District, Beijing, China.

SMA councils with similar characteristics to North Sydney were selected for this exercise specifically those with large proportion of non residential floorspace including City of Sydney, Willoughby City Council, Parramatta City Council, Newcastle City Council, Ryde City Council, Wollongong City Council, Waverley City Council.

The exercise identified consistencies amongst all the Councils waste management and minimisation related provisions across all development types since all of the Councils incorporated the recommended provisions of the Waste Not DCP Model into their DCPs.

This model incorporates Best Practice and is used by most NSW Councils including North Sydney, mainly because it meets one of the standards required to qualify for the annual WaSiP payment.

Generally requirements for sustainable waste management are rare in planning schemes of the interstate authorities reviewed. Where they do exist, they focus on the provision of adequate and accessible space for waste storage and segregation space and hygiene requirements. The review of interstate Councils showed that energy and carbon are the resources most commonly addressed in planning schemes.

Generally the focus for waste management was from the point of storage and access requirements rather than resource recovery.

Overseas planning mechanisms are often linked to rating schemes, which address a suite of sustainability issues but not specific to a particular resource. In some jurisdictions minimum targets are usually set for carbon or energy, and water, and rarely waste across most tools.
OPERATIONAL WASTE

STAGE 3 – REVIEWS AND RECOMMENDATIONS

A review was undertaken of NSW Councils DCP waste related provisions with a view to identify and develop new or enhanced provisions that will drive improvements in waste efficiency of developments post construction, compared to current practice at North Sydney. Councils with similar characteristics to North Sydney, were selected for this exercise specifically those with a large proportion of non residential floorspace including City of Sydney, Willoughby City Council, Paramatta City Council, Newcastle City Council, Ryde City Council, Wollongong City Council, Waverley City Council.

The exercise identified consistencies amongst all the Councils waste management and minimisation related provisions across all development types since all of the Councils reviewed incorporated the recommended provisions of the Waste Not DCP Model into their DCPs.

This model incorporates Best Practice and is used by most NSW Councils including North Sydney, mainly because it meets one of the standards required to qualify for the annual Waste and Sustainability Improvement Payment Scheme (WaSiP) administered by the EPA.

This model has been widely adopted across NSW Councils and also used in Codes and Guides published by Sustainability Victoria.

Generally requirements for sustainable waste management are rare in planning schemes of the interstate authorities reviewed.

Where they do exist, they focus on the provision of adequate and accessible space for waste storage and segregation space and hygiene requirements rather than resource recovery. The review of interstate Councils showed that energy and carbon are the resources most commonly addressed in planning schemes.

Overseas planning mechanisms are often linked to rating schemes, which address a suite of sustainability issues but not specific to a particular resource. In some jurisdictions minimum targets are usually set for carbon or energy, and water, and rarely waste across most tools.

There appears to be nothing of value in the DCPs of other Councils that is not already adequately addressed in North Sydney Councils DDCP.

Whilst the current DDCP provisions for waste are considered best practice, there is scope to expand some of the existing North Sydney provisions across all development types for post construction operational waste, specifically residential development.

Beyond providing for waste separation via the adoption of the Waste Not Model DCP Council has established a system of collection and processing that delivers disposal security, price certainty and one that residents are comfortable using to achieve maximum environmental and commercial benefit (best practice). The important issue is that the correct structure in terms of contractual, regulatory, commercial and environmental standards has been established and provides the basis for maximum performance in the years ahead, particularly as technologies become more reliable and cost effective.

RECOMMENDATIONS

1. It is recommended that the requirement for a Waste Management Plan dealing with operational waste be inserted in Section 1 – Residential Development of draft DCP 2012 so as to ensure consistent application of operational waste regulation across all land uses.
## APPENDIX 1 – SITE WASTE MINIMISATION & MANAGEMENT PLAN TEMPLATE

### APPLICANT AND PROJECT DETAILS (ALL DEVELOPMENTS)

<table>
<thead>
<tr>
<th>Applicant Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Application No.</td>
</tr>
<tr>
<td>Name</td>
</tr>
<tr>
<td>Address</td>
</tr>
<tr>
<td>Phone number(s)</td>
</tr>
<tr>
<td>Email</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Project Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Address of development</td>
</tr>
<tr>
<td>Existing buildings and other structures currently on the site</td>
</tr>
<tr>
<td>Description of proposed development</td>
</tr>
</tbody>
</table>

This development achieves the waste objectives set out in the DCP. The details on this form are the provisions and intentions for minimising waste relating to this project. All records demonstrating lawful disposal of waste will be retained and kept readily accessible for inspection by regulatory authorities such as council, EPA or WorkCover NSW.

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Signature</td>
</tr>
<tr>
<td>Date</td>
</tr>
</tbody>
</table>

Demolition (All Types of Development)

<table>
<thead>
<tr>
<th>Most favourable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Least favourable</td>
</tr>
</tbody>
</table>

Refer to the DCP for objectives regarding demolition waste.
<table>
<thead>
<tr>
<th>Type of waste generated</th>
<th>REUSE</th>
<th>RECYCLING</th>
<th>DISPOSAL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Estimate Volume (m³) or Weight (t)</td>
<td>Estimate Volume (m³) or Weight (t)</td>
<td>Estimate Volume (m³) or Weight (t)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Specify method of on site reuse, contractor and recycling outlet and/or waste depot to be used</td>
<td></td>
</tr>
<tr>
<td>Excavation material</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Timber (specify)</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Concrete</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bricks/pavers</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Tiles</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Metal (specify)</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Glass</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Furniture</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fixtures and fittings</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Floor coverings</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Packaging (used pallets, pallet wrap)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Garden organics</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Containers (cans, plastic, glass)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Paper/cardboard</td>
<td></td>
<td></td>
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<tr>
<td>Residual waste</td>
<td></td>
<td></td>
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<tr>
<td>Hazardous/special waste e.g. asbestos (specify)</td>
<td></td>
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<tr>
<td>Other (specify)</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Construction (All Types of Development)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Address if development:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Refer to the DCP for objectives regarding construction</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Most favourable</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Least favourable</td>
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<td></td>
</tr>
</tbody>
</table>
ESD Best Practice Project – WASTE

Ongoing Operation (Applicable to Residential, Multi Unit, Commercial, Mixed Use and Industrial)

Address of development:

Show the total volume of waste expected to be generated by the development and the associated waste storage requirements.

<table>
<thead>
<tr>
<th>RECYCLABLES</th>
<th>COMPOSTABLES</th>
<th>RESIDUAL WASTE*</th>
<th>OTHER</th>
</tr>
</thead>
<tbody>
<tr>
<td>PAPER/CARDBOARD</td>
<td>METALS/PLASTICS/GLASS</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- Amount generated (L per unit per day)
- Amount generated (L per development per week)
- Any reduction due to compacting equipment
- Frequency of collections (per week)
- Number and size of storage bins required
- Floor area required for storage bins (m²)
- Floor area required for manoeuvrability (m²)
- Height required for manoeuvrability (m)

*Current ‘non-recyclables’ waste generation rates typically include food waste that might be further separated for composting.*
### CONSTRUCTION DESIGN (ALL TYPES OF DEVELOPMENTS)

Outline how measures for waste avoidance have been incorporated into the design, material purchasing and construction techniques of the development (refer to Section 3.2 of the DCP):

#### Materials

<p>| | |</p>
<table>
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#### Lifecycle

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Detail the arrangements that would be appropriate for the ongoing use of waste facilities as provided in the development. Identify each stage of waste transfer between residents’ units/commercial tenancies and loading into the collection vehicle, detailing the responsibility for and location and frequency of, transfer and collection.
APPENDIX 2: MODEL ‘WASTE NOT’ DEVELOPMENT CONTROL PLAN (DCP)

The below information is specific extracts from the Model Waste Not DCP which relates to the ESD Best Practise Project. It is not the complete or whole document.

Development Generally
Site Waste Minimisation and Management Plans
A SWMMP must be submitted for all types of development including demolition, construction and ongoing use of the site/premises. In doing so, the SWMMP nominates operational procedures and measures to minimise and manage waste generated during demolition, construction and ongoing use of the site/premises once the development is complete.

Where a DA is required, with or without the need for a Construction Certificate (CC), a SWMMP must be submitted at development application stage. Where only a CC is required, a SWMMP shall be submitted at the construction certificate stage.

An alternative method is to require the majority of the SWMMP at DA stage, but accept details for construction waste to be submitted with the CC when it is more likely that the builder has been appointed. A benefit of this staged SWMMP approach can be closer involvement of the builder and building certifier/inspector in formulation, approval and monitoring of SWMMPs. However discussion with council’s building section should be undertaken before adopting this alternative.

Assessment Criteria/Controls for All Development
Demolition of Buildings or Structures
A completed SWMMP shall accompany the demolition application and must;

- Pursue adaptive reuse opportunities of buildings/structures.
- Identify all waste likely to result from the demolition, and opportunities for reuse of materials.
- Facilitate reuse/recycling by using the process of ‘deconstruction’, where various materials are carefully dismantled and sorted.
- Reuse or recycle salvaged materials onsite where possible.
- Allocate an area for the storage of materials for use, recycling and disposal (giving consideration to slope, drainage, location of waterways, stormwater outlets, vegetation, and access and handling requirements).
- Provide separate collection bins or areas for the storage of residual waste.
- Clearly ‘signpost’ the purpose and content of the bins and storage areas.
- Implement measures to prevent damage by the elements, odour and health risks, and windborne litter.
- Minimise site disturbance, limiting unnecessary excavation.

When implementing the SWMMP the applicant must ensure:

- Footpaths, public reserves, street gutters are not used as places to store demolition waste or materials of any kind without Council approval.
- Any material moved offsite is transported in accordance with the requirements of the Protection of the Environment Operations Act (1997).
- Waste is only transported to a place that can lawfully be used as a waste facility.
- Generation, storage, treatment and disposal of hazardous waste and special waste (including asbestos) is conducted in accordance with relevant waste legislation administered by the EPA and relevant Occupational Health and Safety legislation administered by WorkCover NSW.
- Evidence such as weighbridge docketts and invoices for waste disposal or recycling services are retained.

Note: Materials that have an existing reuse or recycling market should not be disposed of in a landfill. Figure 1 provides a list of some potential reuse/recycling options. Reuse and recycling opportunities are decreased when asbestos is not carefully removed and segregated from other waste streams.
## Materials and Reuse/Recycling Potential

<table>
<thead>
<tr>
<th>MATERIALS</th>
<th>REUSE/RECYCLING POTENTIAL</th>
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<tbody>
<tr>
<td>Concrete</td>
<td>Reused for filling, levelling or road base</td>
</tr>
<tr>
<td>Bricks and Pavers</td>
<td>Can be cleaned for reuse or rendered over or crushed for use in landscaping and driveways</td>
</tr>
<tr>
<td>Roof Tiles</td>
<td>Can be cleaned and reused or crushed for use in landscaping and driveways</td>
</tr>
<tr>
<td>Untreated Timber</td>
<td>Reused as floorboards, fencing, furniture, mulched or sent to second hand timber suppliers</td>
</tr>
<tr>
<td>Treated Timber</td>
<td>Reused as formwork, bridging, blocking and propping, or sent to second hand timber suppliers</td>
</tr>
<tr>
<td>Doors, Windows, Fittings</td>
<td>Sent to second hand suppliers</td>
</tr>
<tr>
<td>Glass</td>
<td>Reused as glazing or aggregate for concrete production</td>
</tr>
<tr>
<td>Metals (fittings, appliances and wiring)</td>
<td>Removal for recycling</td>
</tr>
<tr>
<td>Synthetic Rubber (carpet underlay)</td>
<td>Reprocessed for use in safety devices and speed humps</td>
</tr>
<tr>
<td>Significant Trees</td>
<td>Relocated either onsite or offsite</td>
</tr>
<tr>
<td>Overburden</td>
<td>Power screened and used as topsoil</td>
</tr>
<tr>
<td>Garden Waste</td>
<td>Mulched, composted</td>
</tr>
<tr>
<td>Carpet</td>
<td>Can be sent to recyclers or reused in landscaping</td>
</tr>
<tr>
<td>Plasterboard</td>
<td>Removal for recycling, return to supplier</td>
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</table>

**Figure 1:** Examples of demolition materials and potential reuse/recycling opportunities from the Model Waste Not DCP

### Construction of Buildings or Structures

The Waste Not DCP requires builders/developers to undertake the following:

- A completed Site Waste Minimisation and Management Plan (SWMMP) shall accompany the application.
- Note: The type of construction determines whether a development application, construction certificate or complying development statement is required. In all cases a SWMMP must be completed.
- Estimate volumes of materials to be used and incorporate these volumes into a purchasing policy so that the correct quantities are purchased. For small-scale building projects see the rates in Appendix B Waste/Recycling Generation Rates of the Waste Not DCP, for a guide.
- Identify potential reuse/recycling opportunities of excess construction materials.
- Incorporate the use of prefabricated components and recycled materials.
- Arrange for the delivery of materials so that materials are delivered ‘as needed’ to prevent the degradation of materials through weathering and moisture damage.
- Consider organising to return excess materials to the supplier or manufacturer.
- Allocate an area for the storage of materials for use, recycling and disposal (considering slope, drainage, location of waterways, stormwater outlets and vegetation).
- Arrange contractors for the transport, processing and disposal of waste and recycling. Ensure that all contractors are aware of the legal requirements for disposing of waste.
- Promote separate collection bins or areas for the storage of residual waste.
• Clearly ‘signpost’ the purpose and content of the bins and storage areas.
• Implement measures to prevent damage by the elements, odour and health risks, and windborne litter.
• Minimise site disturbance and limit unnecessary excavation.
• Ensure that all waste is transported to a place that can lawfully be used as a waste facility.
• Retain all records demonstrating lawful disposal of waste and keep them readily accessible for inspection by regulatory authorities such as council, EPA or WorkCover NSW.

Development-Specific Assessment Criteria/Controls

Single Dwellings, Semi-Detached and Dual Occupancy

The design of waste and recyclables storage areas within the home and property affect ease of use, amenity, the movement and handling of waste for the life of the development.

Control/Requirements

Plans submitted with the SWMMP must show:

• The location of an indoor waste/recycling cupboard (or other appropriate storage space) for each dwelling.
• The location of an onsite waste/recycling storage area for each dwelling, that is of sufficient size to accommodate Council’s waste, recycling and garden waste bins. Indicative bin sizes are shown in Appendix C Indicative Bin Sizes of the Waste Not DCP.
• An identified onsite location for a compost container.
• An identified kerbside collection point for the collection and emptying of Council’s waste, recycling and garden waste bins.
• Waste containers are to be stored in a suitable location so as to avoid vandalism, nuisance and adverse visual impacts.
• A designated area for composting that should not impact on adjoining properties.
• Where possible, the waste/recycling storage area should be located in the rear yard and minimise the distance of travel to the collection point.
• The waste storage area is to be easily accessible and have unobstructed access to Council’s usual collection point.
• There should be sufficient space within the kitchen (or an alternate location) for the interim storage of waste and recyclables.
• The placement of bins for collection at the nominated collection point should ensure adequate traffic and pedestrian safety is maintained.

Note: It is the responsibility of dwelling occupants to move bins to the identified collection point no earlier than the evening before collection day and to then return the bins to their storage area no later than the evening of collection day. Bins are to remain in their on-site storage area at all other times.

Multi-Unit Dwellings (Town Houses, Flats and Villas)

The design of waste and recycling storage areas within the unit and property affects ease of use, amenity, movement and handling of waste for the life of the development. Multiple households within the property increase challenges with regard to waste volumes, ease of access and operation of waste sorting and removal systems. Resources such as the Better Practice Guide for Waste Management in Multi-Unit Dwellings should be used to inform design of multi-unit dwellings.

Note to Council Planners:
The Better Practice Guide for Waste Management in Multi-Unit Dwellings gives detailed information about waste recycling/storage rooms and facilities. The Guide was substantially reviewed in 2007 and is available on the EPA website. Further updates will be published as information from social research and waste stream audits become available.

Control/Requirements

Plans submitted with a development application must show:

• The location of an indoor waste/recycling cupboard (or other appropriate storage space) for each dwelling.
• The location of individual waste/recycling storage areas (such as for townhouses and villas) or a communal waste/recycling storage room(s) able to accommodate Council’s waste, recycling and garden waste bins.
• The location of any garbage chute(s) and interim storage facilities for recyclable materials.
• The location of any service rooms (for accessing a garbage chute) on each floor of the building.
• The location of any waste compaction equipment.
• An identified location for individual compost containers or communal compost container.
• An identified collection point for the collection and emptying of...
Council’s waste, recycling, garden waste bins and bulk household cleanup material.

- The path of travel for moving bins from the storage area to the identified collection point (if collection is to occur away from the storage area).
- The on-site path of travel for collection vehicles (if collection is to occur on-site), taking into account accessibility, width, height and grade.
- Systems should be designed to maximise source separation and recovery of recyclables.
- Waste management systems should be designed and operated to prevent the potential risk or injury or illness associated with the collection, storage and disposal of wastes.

The following minimum collection and storage facilities shall be provided:

- Each dwelling unit should be provided with an indoor waste/recycling cupboard (or other appropriate storage space) for the interim storage of a minimum one day’s garbage and recycling generation.
- Residential flat buildings must include communal waste/recycling storage facilities in the form of a waste/recycling storage room (or rooms) designed in accordance with Appendix D of the Waste Recycling/Storage Rooms in Multi-Unit Dwellings and the Better Practice Guide for Waste Management in Multi-Unit Dwellings.
- Space must be provided for an individual compost container for each dwelling (such as in townhouse and villa developments) or for a communal compost container; the siting of which will have regard to potential amenity impacts.
- The waste/recycling storage area(s) or room(s) must be of a size that can comfortably accommodate separate garbage, recycling and garden waste containers at the rate of Council provision.
- For multi-storey developments that include ten or more dwellings, a dedicated room or caged area must be provided for the temporary storage of discarded bulky items which are awaiting removal. The storage area must be readily accessible to all residents and must be located close to the main waste storage room or area.

The following location and design criteria shall apply to collection and storage facilities:

- In townhouse and villa developments with individual waste/recycling storage areas, such areas should be located and designed in a manner which reduces adverse impacts upon neighbouring properties and upon the appearance of the premises.
- There must be an unobstructed and Continuous Accessible Path of Travel (as per Australian Standard 1428 Design for Access and Mobility - 2001) from the waste/recycling storage area(s) or room(s) to:
  - the entry to any Adaptable Housing (as per Australian Standard 4299 Adaptable Housing - 1995)
  - the principal entrance to each residential flat building
  - the point at which bins are collected/emptied.
- Communal waste storage areas should have adequate space to accommodate and manoeuvre Council’s required number of waste and recycling containers.
- Each service room and storage area must be located for convenient access by users and must be well ventilated and well lit.
- Where site characteristics, number of bins and length of street frontage allow, bins may be collected from a kerbside location (not in north Sydney). In instances where kerbside bin collection is not appropriate, bins must be collected onsite. Bins that are collected onsite are to be collected either from their usual storage point or from an onsite temporary holding area located inside the property boundary and close to a property entrance.
- Where bins cannot be collected from a kerbside location or from a temporary holding area located immediately inside the property boundary, the development must be designed to allow for on-site access by garbage collection vehicles (of dimensions detailed
within Appendix E Garbage Truck Dimensions for Residential Waste Collection of the Waste Not DCP. In these instances, the site must be configured so as to allow collection vehicles to enter and exit the site in a forward direction and so that collection vehicles do not impede general access to, from or within the site. Access driveways to be used by collection vehicles must be of sufficient strength to support such vehicles.

Note: As a minimum requirement for collection vehicle access, Council will require indemnity against claims for loss or damage to the pavement or other driving surface. Council may also require indemnity against liabilities, losses, damages and any other demands arising from any on-site collection service. In all cases, a hazard assessment will need to be conducted prior to Council agreeing to undertake the service.

• Should a collection vehicle be required to enter a property, access driveways and internal roads must be designed in accordance with Australian Standard 2890.2 Parking Facilities – Off-Street Commercial Vehicle Facilities – 2002.
• If Council waste collectors and/or waste collection vehicles are required to enter a site for the purpose of emptying bins, then site specific arrangements must be in place.
• If bins need to be moved from normal storage areas to a different location for collection purposes, it is the responsibility of agents of the owners’ corporation to move the bins to the collection point no earlier than the evening before collection day and to then return the bins to their storage areas no later than the evening of collection day. Bins are to remain in their on-site storage areas at all other times.
• Residents should have access to a cold water supply for the cleaning of bins and the waste storage areas. Storage areas should be constructed and designed to be weather proof and easy to clean, with wastewater discharged to sewer.
• The design and location of waste storage areas/facilities should be such that they compliment the design of both the development and the surrounding streetscape.
• Developments containing four or more storeys should be provided with a suitable system for the transportation of waste and recyclables from each storey to waste storage/collection areas.
• Garbage chutes must be designed in accordance within Appendix F Garbage Chutes, the Building Code of Australia and Better Practice Guide for Waste Management in Multi-Unit Dwellings of the Waste Not DCP. Garbage chutes are not suitable for recyclable materials and must be clearly labelled to discourage improper use. Alternative interim disposal facilities for recyclables should be provided at each point of access to the garbage chute system.

The following management responsibilities shall be addressed:
• Agents of the owners’ corporation must take responsibility for the management of waste and recyclable materials generated upon the site. Arrangements must be in place in regards to the management, maintenance and cleaning of all waste/recycling management facilities.

Commercial Developments and Change of Use (Shops, Offices, Food Premises, Hotels, Motels, Licensed Clubs, Education Establishments, Entertainment Facilities and Hospitals)

A range of non-residential uses present an array of unique waste minimisation opportunities and management requirements. Flexibility in size and layout is often required to cater for the different needs of multiple tenants as well as future changes in use.

Controls/Requirements

A completed Site Waste Minimisation and Management Plan (SWMMP) shall accompany the application.

Note: The nature of the development or change in use will determine whether a development application or construction certificate is required. In all cases a SWMMP must be completed. Maximum waste minimisation and management benefits are achieved when the SWMMP is considered from the earliest stages of the development.

Plans submitted with the SWMMP must show:
• The location of the designated waste and recycling storage room(s) or areas, sized to meet the waste and recycling needs of all tenants.
• The location of temporary waste and recycling storage areas within each tenancy. These are to be of sufficient size to store a minimum of one day’s worth of waste.
• An identified collection point for the collection and emptying of waste, recycling and garden waste bins.

• The path of travel for moving bins from the storage area to the identified collection point (if collection is to occur away from the storage area).

• The on-site path of travel for collection vehicles (if collection is to occur on-site).

• There must be convenient access from each tenancy to the waste/recycling storage room(s) or area(s). There must be step-free access between the point at which bins are collected/emptied and the waste/recycling storage room(s) or area(s).

• Every development must include a designated waste/recycling storage area or room(s) (designed in accordance with Appendix G Commercial/Industrial Waste and Recycling Storage Areas of the Waste not DCP).

• Depending upon the size and type of the development, it may be necessary to include a separate waste/recycling storage room/area for each tenancy.

• All commercial tenants must keep written evidence on site of a valid contract with a licensed waste contractor for the regular collection and disposal of the waste and recyclables that are generated on site.

• Between collection periods, all waste/recyclable materials generated on site must be kept in enclosed bins with securely fitting lids so the contents are not able to leak or overflow. Bins must be stored in the designated waste/recycling storage room(s) or area(s).

• Arrangements must be in all parts of the development for the separation of recyclable materials from general waste. Arrangements must be in all parts of the development for the movement of recyclable materials and general waste to the main waste/recycling storage room/area. For multiple storey buildings, this might involve the use of a goods lift.

• The waste/recycling storage room/area must be able to accommodate bins that are of sufficient volume to contain the quantity of waste generated (at the rate described in Appendix B Waste/Recycling Generation Rates of the Waste Not DCP) between collections.

• The waste/recycling storage room/area must provide separate containers for the separation of recyclable materials from general waste. Standard and consistent signage on how to use the waste management facilities should be clearly displayed.

• The type and volume of containers used to hold waste and recyclable materials must be compatible with the collection practices of the nominated waste contractor.

• Waste management facilities must be suitably enclosed, covered and maintained so as to prevent polluted wastewater runoff from entering the stormwater system.

• Where possible, waste/recycling containers should be collected from a rear lane access point (North Sydney’s requirements re no bins presented on actual laneways). Consideration should be given to the time of day at which containers are collected so as to minimise adverse impacts upon residential amenity, pedestrian movements and vehicle movements.

• The size and layout of the waste/recycling storage room/area must be capable of accommodating reasonable future changes in use of the development.

• A waste/recycling cupboard must be provided for each and every kitchen area in a development, including kitchen areas in hotel rooms, motel rooms and staff food preparation areas. Each waste/recycling cupboard must be of sufficient size to hold a minimum of a single day’s waste and to hold separate containers for general waste and recyclable materials.

• Premises that discharge trade wastewater must do so only in accordance with a written agreement from the local sewer authority. In the Sydney Metropolitan Area (SMA) this is Sydney Water. Sydney Water defines trade wastewater as “any liquid, and any substance contained in it, which may be produced at the premises in an industrial and commercial activity, but does not include domestic wastewater (e.g. from hand-basins, showers and toilets).”

• Premises which generate at least 50 litres per day of meat, seafood or poultry waste must have that waste collected on a daily basis or must store that waste in a dedicated and refrigerated waste storage area until collection.

• Arrangements must be in place regarding the regular maintenance and cleaning of waste management facilities. Tenants and cleaners must be
ESD Best Practice Project – WASTE

aware of their obligations in regards to these matters.

- Any garbage chutes must be designed in accordance with the requirements of Appendix F Garbage Chutes, the Building Code of Australia and Better Practice Guide for Waste Management in Multi-Unit Dwellings within the Waste Not DCP. Garbage chutes are not suitable for recyclable materials and must be clearly labelled to discourage improper use.

Mixed Use Developments (Residential/Non-Residential)

Where residential and commercial land uses occur within the one building or development waste management will necessitate a balancing of variable demands, including preservation of residential amenity.

Controls/ Requirements

- A completed Site Waste Minimisation and Management Plan (SWMMP) shall accompany the application.
- The controls for Multi-Unit Dwellings apply to the residential component of mixed-use development.
- The controls for Commercial Developments apply to the non-residential component of mixed-use development.
- Mixed Use development must incorporate separate and self-contained waste management systems for the residential component and the non-residential component. In particular, the development must incorporate separate waste/recycling storage rooms/areas for the residential and non-residential components. Commercial tenants must be prevented (via signage and other means), from using the residential waste/recycling bins and vice versa.
- The residential waste management system and the non-residential waste management system must be designed so that they can efficiently operate without conflict. Conflict may potentially occur between residential and non-residential storage, collection and removal systems, and between these systems and the surrounding land uses. For example, collection vehicles disrupting peak residential and commercial traffic flows or causing noise issues when residents are sleeping.

Industrial

Industrial developments typically produce a diverse range of waste products. Some of these waste products may be hazardous and require compliance with established laws/protocols that are additional to this Chapter. Other waste products are similar in nature to commercial and domestic waste streams. Mixing waste products limits potential reuse and recycling opportunities and may distribute toxic material through a larger volume of wastes.

Controls/Requirements

- A completed Site Waste Minimisation and Management Plan (SWMMP) shall accompany the application.
- Every development must include a designated general waste/recycling storage area or room(s) (designed in accordance with Appendix G Commercial/Industrial Waste & Recycling Storage Areas of the Waste Not DCP), as well as designated storage areas for industrial waste streams (designed in accordance with specific waste laws/protocols).
- Depending upon the size and type of the development, it might need to include separate waste/recycling storage room/area for each tenancy and/or larger waste producing areas.
- All tenants must keep written evidence on site of a valid contract with a licensed waste
contractor for the regular collection and disposal of all the waste streams and recyclables which are generated on site.

- Between collection periods, all waste/recyclable materials generated on site must be kept in enclosed bins with securely fitted lids so the contents are not able to leak or overflow. Bins must be stored in the designated waste/recycling storage room(s) or area(s).

- Arrangements must be in place in all parts of the development for the separation of recyclable materials from general waste. Arrangements must be in place in all parts of the development for the movement of recyclable materials and general waste to the main waste/recycling storage room/area.

- The waste/recycling storage room/areas must be able to accommodate bins that are of sufficient volume to contain the quantity of waste generated between collections.

- The type and volume of containers used to hold waste and recyclable materials must be compatible with the collection practices of the nominated waste contractor.

- Waste management storage rooms/areas must be suitably enclosed, covered and maintained so as to prevent polluted wastewater runoff from entering the stormwater system.

- A waste/recycling cupboard must be provided for each and every kitchen area in the development. Each waste/recycling cupboard must be of sufficient size to hold a minimum of a single day’s waste and to hold separate containers for general waste and recyclable materials.

- Premises that discharge trade wastewater must do so only in accordance with a written agreement from the local sewer authority. In the Sydney Metropolitan Area this is Sydney Water. Sydney Water defines trade wastewater as ‘any liquid, and any substance contained in it, which may be produced at the premises in an industrial and commercial activity, but does not include domestic wastewater (e.g. from hand-basins, showers and toilets).’

- Arrangements must be in place regarding the regular maintenance and cleaning of waste management facilities. Tenants and cleaners must be aware of their obligations in regards to these matters.

- Production, storage and disposal of hazardous wastes (such as contaminated or toxic material or products) require particular attention. The appropriate laws and protocols should be observed.