Nelson City Council
te kaunihera o whakatū

AGENDA

Ordinary meeting of the
Nelson City Council

Infrastructure

Thursday 27 June 2013
Commencing at the conclusion of the meeting of the Nelson City Council to Adopt the Annual Plan 2013/14
Council Chamber
Civic House
110 Trafalgar Street, Nelson

Membership:

His Worship the Mayor Aldo Miccio, Councillors Ian Barker, Ali Boswijk (Deputy Mayor), Gail Collingwood (Co-Portfolio Holder), Ruth Copeland, Eric Davy (Co-Portfolio Holder), Kate Fulton, Paul Matheson, Jeff Rackley, Pete Rainey, Rachel Reese, Derek Shaw and Mike Ward

Page No.

Opening Prayer

Apologies

1. Interests

1.1 Updates to the Interests Register

1.2 Identify any conflicts of interest in the agenda

2. Confirmation of Order of Business

3. Public Forum

3.1 Sugary Drinks

Dr Roby Beaglehole will speak about the sale of sugary drinks at Council venues and events.

3.2 Brook Waimarama Sanctuary Fence and Conservation Centre

Mr Hudson Dodd, of the Brook Waimarama Sanctuary Trust, will speak about the Brook Waimarama Sanctuary fence and conservation centre.

4. Mayor's Report

5. Status Report - Infrastructure 8-10

Document number 1034781 v9

Recommendation

THAT the Status Report - Infrastructure (1034781 v9) be received.

6. Portfolio Holder's Report

During this part of the meeting the Mayor will be joined by the Infrastructure Co-Portfolio Holder, Councillor Collingwood.

7. Rural River Maintenance 11-33

Document number 1516249

Recommendation

THAT Council will undertake the following works in rivers and streams:

- ***Continue to maintain and upgrade the capacity of those parts of streams and rivers that flow in the sections of the city where stormwater rates are applied, to the standards in Council's Land Development Manual 2010 and any subsequent amendments;***

- ***Maintain those parts of streams and rivers where utilities and structural facilities such as bridges and buildings, owned by Council, are threatened, throughout the full city area;***

- ***Respond to emergencies throughout the full city area;***

AND THAT Council will investigate bank protection and river control works to private property in the areas where stormwater rates are not applied, on a cost sharing basis with adjacent property owners,

AND THAT the Chief Executive be delegated the authority to agree the works to be investigated and determine the appropriate apportionment of costs for works involving private property, on a case by case basis reflecting the public:private benefit of any work, with any necessary funding for Councils apportionment being identified in the next Annual Plan or Long Term Plan;

AND THAT application of a stormwater rate to rural properties to fund river and stream upgrade works without a cost apportionment be considered as part of the next Long Term Plan 2015-25.

8. Solid Waste: Nelson-Tasman Solid Waste Composition Study 34-91

Document number 1528208

Recommendation

***THAT** the report Solid Waste: Nelson – Tasman SWAP Study (1528208) be received;*

***AND THAT** it be noted that the high tonnage of paper/cardboard in landfills will be further investigated through the waste education contract;*

***AND THAT** staff report back on options and costing for further Nelson-Tasman solid waste composition studies;*

***AND THAT** the project to treat organic waste be delayed until such diversion can be economically justified.*

9. Solid Waste TV TakeBack 92-98

Document number 1521529

Recommendation

***THAT** the report Solid Waste TV TakeBack (1521529) be received;*

***AND THAT** Council continue to subsidise the recycling of televisions once the Ministry for the Environment subsidy cap of 2,102 is reached so that Nelson residents are not required to pay more than $10 per television for the recycling of unwanted televisions;*

***AND THAT** TV TakeBack be continued once the Ministry for the Environment scheme has come to an end, noting that Tasman District Council will also be continuing TV TakeBack;*

***AND THAT** the amount of $20,248 budgeted for Zero Waste Grants in the 2013/14 Annual Plan be reserved as a contingency for the continuation of TV TakeBack;*

***AND THAT** a further report be prepared for Council once more reliable information is available so that Council can consider the continued funding of the programme.*

10. Joint Waste Working Party: Annual Review 99-122

Document number 1528204

Recommendation

***THAT** the report Joint Waste Working Party: Annual Review (1528204) be received.*

11. Princes Drive Upgrade 123-125

Document number 1520672

Recommendation

***THAT** the tender for the upgrade of Princes Drive for $1,282,319 from Donaldson Civil be approved.*

12. Parking and Vehicle Control Bylaw (2011), No.207 Amendments to Schedules 126-138

Document number 1528300

Recommendation

***THAT** the following alterations to the Schedules of Bylaw No 207, Parking and Vehicle Control (2011) be approved:*

- ***Schedule 5: Metered Parking;***
- ***Schedule 8: Time Limited Parking Areas;***
- ***Schedule 9: No Stopping;***
- ***Schedule 14: Give Way Signs.***

CROSS COUNCIL ITEMS

13. Sugary Carbonated Drinks 139-146

Document number 1495197

Recommendation

***THAT** Council develop a policy on the sale of sugary carbonated drinks from Council facilities and parks and Council events;*

OR

***THAT** Council does not develop a policy on the sale of sugary carbonated drinks from Council facilities and parks and Council events.*

PUBLIC EXCLUDED BUSINESS

14. Exclusion of the Public

Recommendation

***THAT** the public be excluded from the following parts of the proceedings of this meeting.*

The general subject of each matter to be considered while the public is excluded, the reason for passing this resolution in relation to each matter and the specific grounds under section 48(1) of the Local Government Official Information and Meetings Act 1987 for the passing of this resolution are as follows:

Item	General subject of each matter to be considered	Reason for passing this resolution in relation to each matter	Particular interests protected (where applicable)
1	**Public Excluded Status Report – Infrastructure – 27 June 2013** This report contains information relating to:	Section 48(1)(a) The public conduct of this matter would be likely to result in disclosure of information for which	The withholding of the information is necessary:

	Boulder Bank Culvert Agreement	good reason exists under section 7	• Section 7(2)(i) To carry out negotiations
	Southern Arterial Corridor Land Purchase		• Section 7(2)(i) To carry out negotiations
2	**Brook Waimarama Sanctuary Fence and Conservation Centre** This report contains information relating to the Brook Waimarama Sanctuary Business Case and Feasibility Study, and the request to relocate the Brook Conservation Centre into the grounds of the Brook Valley Holiday Park.	Section 48(1)(a) The public conduct of this matter would be likely to result in disclosure of information for which good reason exists under section 7	The withholding of the information is necessary: • Section 7(2)(c) To protect information that is subject to an obligation of confidence • Section 7(2)(e) To avoid prejudice to measures that prevent or mitigate loss to the public • Section 7(2)(i) To carry out negotiations
3	**Drainage Ownership Policy Public Private Drains** This report contains information relating to an amended Drainage Ownership Policy (Sewer and Stormwater) that updates the working definitions of categories of drains and clarifies Council's maintenance obligations for public sewer and stormwater drains.	Section 48(1)(a) The public conduct of this matter would be likely to result in disclosure of information for which good reason exists under section 7	The withholding of the information is necessary: • Section 7(2)(g) To maintain legal professional privilege

15. Re-admittance of the public

Recommendation

***THAT* the public be re-admitted to the meeting.**

Note:

- **Youth Council representatives Joseph Cotton and John Gibson will be in attendance at this meeting.**
- **Lunch will be provided at 12.30pm.**

INFRASTRUCTURE STATUS REPORT – 27 JUNE 2013

No	Meeting Date	Document Number	Report Title/Item Title	Officer	Resolution or Action	Status
1	7/6/2012	1311203	Occupation of Trafalgar Street Footpath by Mr Lewis Stanton	Alec Louverdis	Council directed staff to bring back a report to consider the option of a permit with conditions for Mr Stanton. This followed the resolution on the 28 June 2012 for this matter to lie on the table until consultation had been carried out.	**27/6/2013** Mr Stanton continues to be issued with parking infringments in the CBD. A revised date to hear the injunction case against Mr Stanton relating to trading at Tahuna Beach has yet to be re-scheduled by the Courts. Mr Stanton continues to camp around the City. Complaints are still coming in from ratepayers and businesses relating to his camping and his occupying CBD parking spaces. Following a report to the 6 June Policy and Planning Council meeting on the formal outcome of the Freedom Camping bylaw review officers will bring back a report to Council in the matter of Mr Stanton.
2	11/10/2012	1363000	The Cliffs – Battery Observation Post	Alec Louverdis	THAT Council give approval for staff to initiate resource consent proceedings to either remove or stabilise the Battery Observation Post from Council Road Reserve in the vicinity of No. 36 the Cliffs as a matter of urgency; AND THAT should the New Zealand Transport Agency deem that removal of	**27/6/2013** NZTA advise that work will commence around August 2013. The Observation Post remains stable.

No	Meeting Date	Document Number	Report Title/Item Title	Officer	Resolution or Action	Status
					the Battery Observation Post is the only option, that staff proceed with the removal of the structure; AND THAT all costs incurred in this matter be funded from provision set aside for the 2011 December Rainfall Event Recovery budget in the current financial year.	
3	21/02/2013	1431505	Major Projects Report	Alec Louverdis	AND THAT the advertising of the tender for the construction of the Wakefield Quay Jetty (Wakefield Quay Development Stage 5 Project 1096) be withheld while further investigation into the future of the Plant and Food building (old Power House) is undertaken.	**27/6/2013** Tender advertising stopped and not going ahead. A further report will be presented to Council with respect to the Plant and Food building, following receipt of all relevant information pertaining to the building.
4	21/02/2013	1414571	High-Productivity Motor Vehicle Routes	Rhys Palmer/ Paul Harrington	AND THAT approval be granted on the following routes for the use of High-Productivity Motor Vehicles, subject to satisfactory public engagement with residents along the route: • Bolt Road (Golf Haven Way to Parkers Road) • Saxton Road (Main Road Stoke to Nayland Road); AND THAT approval be granted on the following route for the use of High-Productivity Motor Vehicles, subject to satisfactory structural assessments: • Main Road Stoke (910 Main Road Stoke (Alliance) to Saxton Road); • Pascoe Street (Quarantine Road to Orion Street)	**27/6/2013** Public engagement underway with residents and the Regional Transport Committee informed. Structural assessments programmed for 2013/14.

No	Meeting Date	Document Number	Report Title/Item Title	Officer	Resolution or Action	Status
					AND THAT approval be granted on the following route for the use of High-Productivity Motor Vehicles, subject to satisfactory public engagement with residents along the route and a satisfactory structural assessment: • Parkers Road (Bolt Road to State Highway 6);	

Nelson City Council
te kaunihera o whakatū

Council – Infrastructure

27 June 2013

REPORT 1516249

Rural River Maintenance

1. Purpose of Report

1.1 To inform Council of issues associated with maintenance of rivers in rural areas and to adopt an interim proposal for extending Council's river maintenance works until the Long Term Plan 2015-25 has been adopted.

2. Recommendation

THAT Council will undertake the following works in rivers and streams:

- ***Continue to maintain and upgrade the capacity of those parts of streams and rivers that flow in the sections of the city where stormwater rates are applied, to the standards in Council's Land Development Manual 2010 and any subsequent amendments;***

- ***Maintain those parts of streams and rivers where utilities and structural facilities such as bridges and buildings, owned by Council, are threatened, throughout the full city area;***

- ***Respond to emergencies throughout the full city area;***

AND THAT Council will investigate bank protection and river control works to private property in the areas where stormwater rates are not applied, on a cost sharing basis with adjacent property owners,

AND THAT the Chief Executive be delegated the authority to agree the works to be investigated and determine the appropriate apportionment of costs for works involving private property, on a case by case basis reflecting the public:private benefit of any work, with any necessary funding for Councils apportionment being identified in the next Annual Plan or Long Term Plan;

***AND THAT** application of a stormwater rate to rural properties to fund river and stream upgrade works without a cost apportionment be considered as part of the next Long Term Plan 2015-25.*

3. Background

3.1 Council's role in the maintenance of rivers and streams in the city is governed by legislation. In particular the following statutes apply:

- The Land Drainage Act 1908;
- The Soil Conservation and Rivers Control Act 1941;
- The Resource Management Act 1991;
- The Local Government Act 2002.

3.2 For the purpose of controlling natural water flows and stormwater the various pieces of legislation broadly fall into two categories; those that set out Council's roles and responsibilities and those that confer various powers upon Council for the undertaking of the necessary works.

3.3 The Land Drainage Act 1908 provides Council, as a Local Authority, with powers to carry out works necessary to ensure watercourses are kept free of obstructions or to require property owners to do the same. The Act also allows property owners to require Council to ensure other property owners carry out necessary works where water courses cross the other parties land (Attachment 1).

3.4 The Soil Conservation and Rivers Control Act 1941 confirms that Council as a territorial authority with jurisdiction over an area has a function to minimise and prevent damage within its district from floods and erosion. This Act provides Council with the powers to undertake works with that end in mind (Attachment 2).

3.5 The Resource Management Act 1991 sets out the various functions of regional and territorial authorities. With respect to flooding and soil erosion Council controls the use of land through the Nelson Resource Management Plan.

3.6 The Local Government Act 2002 requires Council to continue to provide water services to its district or region. The Act defines water services to include stormwater drainage. Part 29 of the Local Government Act 1974 remains in force and provides Council with a range of powers for Land Drainage and Rivers Clearance. (Attachment 3)

3.7 The stormwater drainage network in the city consists of pipes, ditches, smaller open channels, creeks, streams and rivers. All of which have parts that are under public ownership and control and parts that are under private ownership and control.

3.8 For the most part, public ownership and control is characterised by services that Council actively maintains, have easements in Council's favour, serve Council owned facilities or have been vested in Council through the Resource Management Act 1991 or the Reserves Act 1977.

3.9 Council currently only actively maintains and upgrades the public section of the piped reticulation and small open channel drains throughout the urban sections of the city. Likewise only the following eleven of the various larger water courses are maintained and only within the urban sections of the city through which they flow:

- Todd Valley Stream;
- Oldham Creek (Dodson Valley);
- Maitai River;
- Brook Stream;
- York Stream;
- Jenkins Stream (Enner Glynn);
- Maire Stream (Douglas Road);
- Arapiki Stream;
- Poormans Stream (Marsden Valley);
- Orchard Stream (Stoke from Upper Songer Street);
- Orphanage Stream (Ngawhatu Valley).

3.10 Council has had a programme of active upgrading of the above streams, in their historical urban reaches only. Ongoing subdivision and residential development in a number of these catchments has lead to a mix of developer led channel upgrades or various stormwater detention and disposal measures.

3.11 The Whangamoa River, Wakapuaka River, Teal River and Lud River, together with their tributaries, are not actively maintained although some gravel is removed from the Wakapuaka River at the Maori Pa Road bridge. Saxton Creek has not been actively maintained in the past given its rural nature. However recent subdivision and flooding in the area has lead Council to carry out some gravel removal works and commission a report into the capacity of the stream channel.

3.12 Currently, Council does not take stormwater rates from any property to the East of the Gentle Annie Saddle, nor from properties that are greater than 15 Hectares in area. Consequently no day to day maintenance or capital upgrades are carried out in the majority of these areas. The general exception is gravel extraction which is carried out in the Maitai River.

3.13 Council does receive occasional requests for assistance from landowners in rural areas. These requests typically follow heavy rain events and can range from assistance with the removal of tree debris and gravel build-up, to the protection of river banks from erosion. In recent years, approaches have been made to Council to carry out works in the Lud River, Wakapuaka River, Saxton Creek and rural sections of the Maitai River and Poormans Stream, generally in areas that are subject to bank erosion.

4. Discussion

4.1 To date Council has restricted its role in stormwater control and prevention of damage from flooding, to the urban sections of the city and rated accordingly. The various pieces of legislation do not distinguish between rural and urban rivers and streams or parts thereof and some liability may be directed towards Council if it were seen to be acting without proper care or simply not discharging its statutory responsibilities.

5. Financial Impact

5.1 For the 2013/14 financial year Council has an Operations and Maintenance budget of approximately $240,000 for flood protection, which includes $50,000 for an enhanced response to rural river maintenance. This budget allows for ongoing inspections and repairs, from annual flood events, of the urban sections of rivers and streams with an enhanced ability to respond to other areas where Council utilities and structural facilities are threatened. This additional work is likely to consist of gravel removal, vegetation clearance and rock protection works.

5.2 Additional funding for recovery works arising from the December 2011 and April 2013 storm events has also been allowed for in separate budgets.

5.3 Capital Expenditure on stream and river upgrading has been focussed on completing the initial stream upgrading works begun in the late 1990s. Work on the Maitai River and York Stream is currently underway.

5.4 Works to streams in the urban sections of the city are currently funded from stormwater rates where the expected Level of Service is being addressed, and development contributions where works are for the provision of additional capacity arising from growth. While extending the maintenance to rural sections of the network will attract additional costs which are difficult to quantify at this stage, a figure of $50,000 was included in the latest Annual Plan for the 2013/14 year. With regards to flood protection and soil conservation works, section 138 of The Soil Conservation and Rivers Control Act 1941 allows Council to agree with owners for the apportionment of the cost of works.

5.5 The next Asset Management Plan and Long Term Plan should identify a programme of works in rural areas and address extending the stormwater rate, either in whole or part, to those areas of Nelson that are not currently rated for stormwater/flood protection services.

6. Options

6.1 Options for Council to consider are:

- Option 1: Council will only fund, maintain and upgrade the capacity of those parts of streams and rivers that flow in the sections of the city where stormwater rates are applied.
- Option 2: Council will fund, maintain and upgrade the capacity of all streams and rivers in the Nelson area.

- Option 3: Council will fund, maintain and upgrade the capacity of those parts of streams and rivers that flow in the sections of the city where stormwater rates are applied; clear debris and gravel from streams and rivers where public utilities and structural facilities such as bridges and buildings, owned by Council are threatened in the remainder.
- Option 4: Council will fund, maintain and upgrade the capacity of those parts of streams and rivers that flow in the sections of the city where stormwater rates are applied, to the standards in Council's Land Development Manual 2010 and any subsequent amendments; maintain streams and rivers where public utilities and structural facilities such as bridges and buildings, owned by Council are threatened in the areas not covered by stormwater rates and carry out bank protection and river control works in the areas not covered by stormwater rates on a cost sharing basis with adjacent property owners based on Council agreeing the need for the works and funding being approved in the next Annual Plan or Long Term Plan for Council's share.

- Option 5: Option 4 plus:
- Council will consider extending the stormwater rate for rural areas to fund river and stream upgrade works, without a cost apportionment, but following a priority list of works developed in the next Stormwater Asset Management Plan, being approved in the Long Term Plan 2015-25.

6.2 In all cases Council will respond to emergencies throughout the full city area.

7. Conclusion

7.1 It is important for Council to consider the requirements of stormwater control and flood protection throughout the city.

7.2 It is not considered affordable for the part of the community that is currently rated for stormwater, to undertake the maintenance and upgrading of all rural sections of streams and rivers in the wider city area.

7.3 It is recommended that Option 5 above be adopted and the stormwater rate be reviewed in the Long Term Plan 2015-25.

Phil Ruffell
Principal Adviser Utilities

Attachments

Attachment 1: Land Drainage Act 1908 1526502

Attachment 2: Soil Conservation and Rivers Control Act 1941 1525506

Attachment 3: Local Government Act 1974 1527334

Supporting information follows.

Supporting Information

1. Fit with Purpose of Local Government

Rural river maintenance meets the purpose of the Local Government Act 2002 "Good quality local infrastructure".

Extending Council's maintenance programme to sections of rural rivers affecting public infrastructure with property owners paying an apportioned amount for any works with a private benefit was determined to be the most cost-effective option of responding to flood protection as it balanced public good and private benefit.

2. Fit with Community Outcomes and Council Priorities

Rural river maintenance meets the Community Outcome of "Kind, Healthy People".

3. Fit with Strategic Documents

Rural river maintenance was referred to in the Stormwater Asset Management Plan 2012-22 and the Long Term Plan 2012-22.

4. Sustainability

Rural river maintenance meets the Sustainability requirement of "Economic Outcomes" by defining Council's responsibility for public infrastructure and requiring property owners to contribute to the protection of their property.

5. Consistency with other Council policies

N/A.

6. Long Term Plan/Annual Plan reference and financial impact

Impacts of rural river maintenance will be monitored and reported through Annual Plans, Annual Reports and Long Term Plans.

7. Decision-making significance

This is not a significant decision in terms of the Council's Significance Policy.

8. Consultation

No consultation has yet been undertaken. This will occur through each Annual Plan and Long Term Plan.

9. Inclusion of Māori in the decision making process

No consultation has been undertaken with Maori.

10. Delegation register reference

Decision of Council.

Land Drainage Act 1908

17 To construct and maintain drains and watercourses

- The Board may for the purposes of this Act from time to time, by itself, its surveyors, agents, officers, and workmen, exercise the following powers or any of them, and may execute, do, or cause to be executed or done any of the following matters, works, or acts, namely:
    - (a) Cleanse, repair, or otherwise maintain in a due state of efficiency any existing watercourse or outfall for water, either within or beyond the district, or any existing bank or defence against water:
    - (b) Deepen, widen, straighten, divert, or otherwise improve any existing watercourse or outfall for water, either within or beyond the district, or remove obstructions to watercourses or outfalls for water, or raise, widen, or otherwise alter any existing defence against water:
    - (c) Make any new watercourse or new outfall for water, or erect any new defence against water, or erect any machinery, or do any other act required for the drainage of the district:
    - (d) Construct any drains of such materials and in such manner as it thinks necessary or proper for carrying the purposes of this Act into execution, and break up the soil of any roads, ways, or footpaths within the district, and excavate and sink trenches for the purpose of laying down, making, and constructing drains therein, and cause such drains to communicate with the sea or any arm thereof, or with any stream or watercourse either within or beyond the district, and also from time to time open, cleanse, and repair such drains, or alter the position thereof, and do all such acts, matters, and things as it deems expedient, necessary, or proper for making, amending, repairing, completing, or improving any watercourse or drain or other works to be made, done, and provided for the purposes of this Act:
    - (e) Take, purchase, and hold any lands, or any estate or interest therein, within or beyond the district, which in its opinion may be required for the purposes of this Act:

- (f) Without any previous payment, tender, or deposit, enter upon and use any land within the district for the purpose of taking any earth, stone, clay, or material therefrom, and enter upon and use any adjacent lands for making temporary roads or approaches to any works connected with any works constructed under this Act:
  Provided always that the Board shall pay reasonable compensation for the use of the land or otherwise, and such compensation, if the parties cannot agree, shall be settled by or before a District Court Judge, sitting with 2 Assessors as provided by section 85 hereof:
- (g) Make, maintain, alter, or discontinue all such works of any kind or description, and erect such buildings and machinery within the district as it thinks proper for the purposes of this Act:
- (h) Without any previous agreement with the owner or occupier of any land within the district, upon giving 24 hours' notice, enter upon any such land, whether the same is Crown land or not, and take levels of the same:
- (i) Enter upon, take, and hold any land within the district for the purposes of this Act:
- (j) In the making, widening, deepening, cleansing, or repairing of any drain or ditch, remove the soil thereof, and place it on the bank on either side of such drain or ditch:
- (k) Fill up or obstruct any drain:
  Provided that the Board shall first make in lieu thereof a drain or drains equally efficient; and any dispute as to the efficiency of drains so made shall be decided by a District Court Judge sitting with 2 Assessors.

- Paragraphs (f) and (k): the words "District Court Judge" were substituted, as from 1 April 1980, for the word "Magistrate" pursuant to section 18(1) District Courts Amendment Act 1979 (1979 No 125).

18 May enter lands, etc, for survey, etc

- (1) For the purposes of any inspection, survey, or inquiry directed as necessary under any of the provisions of this Act, the Board, or its surveyors, agents, officers, and workmen, may enter upon any lands or premises in the district within or upon which it is proposed that any works shall be executed under this Act, or any lands and premises adjoining thereto, and if necessary may dig or bore therein, and may also examine where necessary any weir, sluice, or floodgate erected in or upon any watercourse, and open or raise any

floodgate or sluice for the purposes of any such examination, and make any soundings, or bore the bed or channel of any part of any such watercourse, or any mill-course connected therewith, making reasonable compensation for any damage done thereby.
(2) The amount of such compensation shall be ascertained by a District Court Judge sitting with 2 Assessors, and such District Court Judge is hereby authorised and required to inquire into and determine the same, and for that purpose to examine on oath or otherwise all such witnesses as may be produced before him, and to make such order as he deems just for the payment by the Board to the party aggrieved of the amount of such damage.
(3) Pending the decision of the District Court Judge, the Board, its surveyors, agents, engineers, officers, and workmen, may enter upon such lands and watercourses as aforesaid and do all necessary matters and things authorised by this Act.

In subsections (2) and (3) the words "District Court Judge" were substituted, as from 1 April 1980, for the word "Magistrate" pursuant to section 18(1) District Courts Amendment Act 1979 (1979 No 125).

19 May enter and take earth, etc

- (1) The Board, or any officer appointed by the Board, may from time to time cut, dig, take, and carry away, or cause to be cut, dug, taken, or carried away, any quantity of earth or materials in, upon, out of, or from any lands within the district.
(2) Reasonable compensation for digging and taking of earth or other materials therefrom for the purposes of this Act shall be made to the owner or occupier of such land for the damage thereby sustained, as agreed on between the Board and the owner or occupier of the land.
(3) If such owner or occupier cannot agree with the Board concerning the amount of such damage, then the same shall be assessed and finally determined by a District Court Judge sitting with 2 Assessors, upon complaint thereof by such owner or occupier.
(4) Notice in writing of such complaint shall be given to the Board by such owner or occupier 14 days before such complaint is made.

In subsection (3) the words "District Court Judge" were substituted, as from 1 April 1980, for the word "Magistrate" pursuant to section 18(1) District Courts Amendment Act 1979 (1979 No 125).

Part 3
Powers of local authorities

60 Interpretation

- In this Part of this Act, if not inconsistent with the context,— **Local authority** means any Harbour Board, Drainage Board, River Board, and any other Board, Commissioners, Trustees, or other persons or body however designated having authority under any Act to undertake the construction of any public work.

Section 60 was amended, as from 1 April 1980, by section 8(3) Local Government Amendment Act 1979 (1979 No 59) by omitting the words "City or Borough Council, County Council, Town Council, Road Board"

61 Powers of local authority not within drainage or river district

- Every local authority not within a drainage district constituted under Part 1 of this Act, nor within a river district constituted under the River Boards Act 1908, shall have and may, in regard to the cleansing, repairing, or otherwise maintaining of watercourses or drains, exercise the powers exercised by Boards under Part 1 hereof.

62 Local authority may order removal of obstruction from watercourse or drain

- (1) Where there is any watercourse or drain within or beyond the district of a local authority, and its obstruction, in the opinion of the local authority, is likely to cause damage to any property in such district, the local authority may order the occupier (or, if there is no occupier, the owner) of any land on the banks of such watercourse or drain within the district or within 1.5 kilometres beyond the boundary of the district to remove from such watercourse or drain, and from the banks of such watercourse or drain to a distance not

exceeding 3 metres from the nearest margin of the watercourse or drain, all obstructions of any kind calculated to impede the free flow of water in such watercourse or drain.

(1A) For all the purposes of this section—

- (a) **Obstructions** includes earth, stone, timber, and material of all kinds, and trees, plants, weeds, and growths of all kinds:
- (b) The occupier or owner of land adjoining a road shall be deemed to be the occupier or owner of land on the banks of any watercourse or drain running upon such road where such road fronts the land of such occupier or owner, unless such watercourse or drain has been artificially constructed by the local authority for the purpose only of draining the surface of such road:
- (c) **Remove**, in relation to any obstruction consisting of trees, plants, weeds, or growths, includes, if the local authority so specifies, burning, poisoning, cutting, or treating, whether with or without the removal of the burnt, poisoned, cut, or treated portions.

(2) Every occupier or owner who fails to commence the work specified in the order within 14 days from the receipt thereof and to continue that work with all reasonable expedition or, where the local authority specifies a time within which the work must be completed, who fails to complete the work within the time specified in the order is liable to a fine not exceeding $2 for every day during which such order is not obeyed, and a further sum equal to the cost incurred by the local authority in removing any such obstruction; and the said cost shall be a charge on the land, and may be recovered as rates are recovered under any Act for the time being in force in the district:

Provided that any such occupier or owner may appeal to a District Court Judge against such order within 10 days after the service thereof, and such District Court Judge shall have jurisdiction to determine whether such order shall have effect, having regard to all the circumstances of the case, and pending the determination of such appeal the order shall be suspended.

(3) The local authority, for the purpose of removing any obstruction from a watercourse or drain, either within or beyond the limits of the district of its jurisdiction, shall by its servants have the free right of ingress, egress, and regress on any land on the banks of any such watercourse or through which any such drain runs.

Subsection (1) was substituted, as from 4 December 1913, by section 7 Land Drainage Amendment Act 1913 (1913 No 31).
Subsection (1) was amended, as from 8 November 1974, by section 2(2) Land Drainage Amendment Act 1974 (1974 No 93) by substituting the expressions "1.5 kilometres" and "3 metres" for the expressions "one mile" and "ten feet".
Subsection (1A) was inserted, as from 4 December 1913, by section 7 Land Drainage Amendment Act 1913 (1913 No 31).
Subsection (1A)(c) was inserted, as from 10 May 1956, by section 9(1) Land Drainage Amendment Act 1956 (1956 No 7).
The words "District Court Judge" were substituted, as from 1 April 1980, for the word "Magistrate" pursuant to section 18(1) District Courts Amendment Act 1979 (1979 No 125).

63 Power to compel local authority to order removal of weeds and obstructions

- Where any ratepayer within the district of a local authority, by notice in writing, requests the local authority to exercise the powers conferred by the last preceding section by ordering any specified occupier or owner of land to remove from any specified watercourse or drain all weeds and other growth or refuse and obstructions of any kind, and for the space of 28 days after receipt of the notice the local authority fails to comply therewith, then the following provisions shall apply:
    - (a) Such ratepayer may, by complaint under the Summary Proceedings Act 1957 (the provisions whereof shall, mutatis mutandis, apply), call upon the local authority to appear before a District Court Judge to show cause why such notice should not be complied with:
    - (b) On the hearing of such complaint the District Court Judge shall have jurisdiction to determine whether and to what extent such notice should be complied with by the local authority, and his decision shall be final:
      Provided that any order made by the local authority pursuant to the District Court Judge's decision shall be subject to appeal as provided in the last preceding section.
- The reference to the "Justices of the Peace Act 1908" was substituted, as from 1 January 1928, by a reference to the "Justices of the Peace Act 1927" pursuant to section 390 Justices of the Peace Act 1927 (1927 No 37). That reference was in turn substituted, as from 1 April 1958, by a reference to the "Summary Proceedings Act 1957" by section 214(1) Summary Proceedings Act 1957 (1957 No 87).

- The words "District Court Judge" and "District Court Judge's" were substituted, as from 1 April 1980, for the word "Magistrate" and "Magistrate's", pursuant to section 18(1) District Courts Amendment Act 1979 (1979 No 125).

64 Governor-General may direct drains or drainage works to be under control of local authority

- (1) The Governor-General in Council may from time to time, by Proclamation publicly notified,—
  - (a) Direct that any drains or drainage works already constructed or which may hereafter be constructed, and any watercourses, respectively shall, from and after a date to be fixed in such Proclamation, be under the exclusive care, control, and management of such local authority as is mentioned in that behalf in such Proclamation:
  - (b) Vary or alter such care, control and management:
  - (c) Fix and determine whether all or any, and, if so, what part, of the cost of managing, repairing, improving, or reconstructing any such drain, drainage works, or watercourses, and the machinery and appliances used therewith, is to be provided and paid by any local authority or local authorities (if more than one), and, if so, by what local authority or local authorities (if more than one):
  - (d) Direct how, when, and to whom any such payment is to be made.

(2) Every payment so directed to be made shall be made as directed by such Proclamation, and unless so made may be recovered in any Court of competent jurisdiction at the suit of the Minister as a debt due to Her Majesty, or of the local authority, as the case may be, to whom such payment ought to be made.

(3) In fixing and apportioning the cost of managing, maintaining, repairing, improving, or reconstructing any such drain, drainage works, or watercourses, and the machinery and appliances used therewith, the Governor-General shall take into account the net revenue (if any) derived from or incident to the use of such drain, drainage works, or watercourses by the local authority having the care, control, management, or maintenance thereof.

Soil Conservation and Rivers Control Act 1941

Interpretation

- (1) In this Act, unless the context otherwise requires,—
  Catchment Board or **Board** means a Catchment Board constituted under this Act; and includes, in relation to any area which is not within a catchment district, the territorial authority with jurisdiction over that area or, if there is no such territorial authority, the Minister of Local Government
  catchment district or **district** means a catchment district constituted under this Act
  constituent district, in relation to any catchment district, means—
  - (a) any district of a territorial authority, within the meaning of the Local Government Act 2002, situated wholly or partly within the catchment district:
  - (b) *[Repealed]*
  - (c) *[Repealed]*
  - (d) any constituent district for the time being constituted by Order in Council under section 42A (as inserted by section 3 of the Soil Conservation and Rivers Control Amendment Act 1967)

  defence against water includes any dam, weir, bank, carriageway, groyne, or reservoir, and any structure or appliance of whatsoever kind which has or may have the effect of stopping, diverting, controlling, restricting, or otherwise regulating the flow or spread or subsidence, in or out of a watercourse, of water including flood waters
  drainage district and **Drainage Board** mean respectively a drainage district and a Board of Trustees for a drainage district constituted under the Land Drainage Act 1908
  internal Drainage Board means the Drainage Board of an internal drainage district or of the drainage district of which an internal drainage district forms part
  internal drainage district, in relation to a catchment district, means any drainage district or part of a drainage district situated within the catchment district
  internal River Board means the River Board of an internal river district or of the river district of which an internal river district forms part
  internal river district, in relation to a catchment district, means any river district or part of a river district situated within the catchment district

local governing authority means a territorial authority within the meaning of the Local Government Act 2002
member means a member of a Catchment Board
Minister means the Minister for the Environment
river district and **River Board** mean respectively a river district and a River Board constituted under the River Boards Act 1908
Secretary means the Secretary to a Catchment Board
territorial authority means a territorial authority within the meaning of the Local Government Act 2002
tidal lands means such parts of the bed, shore, or banks of a tidal water as are covered and uncovered by the flow and ebb of the tide at ordinary spring tides
tidal water means any part of the sea or of a river within the ebb and flow of the tide at ordinary spring tides
watercourse includes every river, stream, passage, and channel on or under the ground, whether natural or not, through which water flows, whether continuously or intermittently.
(1A) For the purposes of the definition of the term Catchment Board in subsection (1), a territorial authority shall be deemed to have jurisdiction over any part of the territorial sea adjacent to its territorial authority district which is not within a catchment district.
(2) When anything is required to be **published**, or **publicly notified**, or **public notice** of anything is to be given, it is meant that a notice thereof shall be published in some newspaper circulating in the district, or, where there is no such newspaper in general circulation, that printed placards containing the notice shall be affixed to public places in the district. A notice setting forth the object, purport, or general effect of a document shall in any case be sufficient notice of that document.
(3) If an area of land is defined in any document for the purposes of this Act and the definition assigns to the area a distinguishing name, then, if the document is gazetted, it shall be sufficient definition of the area in future documents relating to the same area to refer to it by the name so assigned with the addition of a reference, by the date, page, and number of the *Gazette*, to the document by which the name was assigned and the area defined.

Section 2(1) **Authority**: repealed, on 1 April 1988, by section 2(1) of the Soil Conservation and Rivers Control Amendment Act 1988 (1988 No 48).

Section 2(1) **Catchment Board** or **Board**: amended, on 1 April 1988, by section 2(2) of the Soil Conservation and Rivers Control Amendment Act 1988 (1988 No 48).

Section 2(1) **clerk**: repealed, on 19 November 1948, by section 2(1)(a) of the Soil Conservation and Rivers Control Amendment Act 1948 (1948 No 40).
Section 2(1) **constituent district** paragraph (a): replaced, on 1 April 1980, by section 8(3) of the Local Government Amendment Act 1979 (1979 No 59).
Section 2(1) **constituent district** paragraph (a): amended, on 1 July 2003, by section 262 of the Local Government Act 2002 (2002 No 84).
Section 2(1) **constituent district** paragraph (b): repealed, on 1 April 1980, by section 8(3) of the Local Government Amendment Act 1979 (1979 No 59).
Section 2(1) **constituent district** paragraph (c): repealed, on 1 April 1980, by section 8(3) of the Local Government Amendment Act 1979 (1979 No 59).
Section 2(1) **constituent district** paragraph (d): inserted, on 26 October 1967, by section 3(2) of the Soil Conservation and Rivers Control Amendment Act 1967 (1967 No 32).
Section 2(1) **Council**: repealed, on 1 April 1984, by section 3(2) of the Soil Conservation and Rivers Control Amendment Act 1983 (1983 No 152).
Section 2(1) **defence against water**: replaced, on 21 October 1959, by section 2(1) of the Soil Conservation and Rivers Control Amendment Act 1959 (1959 No 48).
Section 2(1) **local governing authority**: replaced, on 1 July 2003, by section 262 of the Local Government Act 2002 (2002 No 84).
Section 2(1) **Minister**: replaced, on 1 April 1988, by section 2(3) of the Soil Conservation and Rivers Control Amendment Act 1988 (1988 No 48).
Section 2(1) **Secretary**: inserted, on 19 November 1948, by section 2(1)(b) of the Soil Conservation and Rivers Control Amendment Act 1948 (1948 No 40).
Section 2(1) **territorial authority**: replaced, on 1 July 2003, by section 262 of the Local Government Act 2002 (2002 No 84).
Section 2(1A): inserted, on 1 April 1988, by section 2(4) of the Soil Conservation and Rivers Control Amendment Act 1988 (1988 No 48).
Section 2(3): inserted, on 21 October 1959, by section 2(3) of the Soil Conservation and Rivers Control Amendment Act 1959 (1959 No 48).

General functions and powers

126 General powers of Catchment Boards

- (1) It shall be a function of every Catchment Board to minimise and prevent damage within its district by floods and erosion.

  (2) Each Board shall have all such powers, rights, and privileges as may reasonably be necessary or expedient to enable it to carry out its functions, and in particular each Board shall have power to construct, reconstruct, alter, repair, and maintain all such works and do and execute all such other acts and deeds including the breaching of any stopbank as may in the opinion of the Board be necessary or expedient for—

- (a) controlling or regulating the flow of water towards and into watercourses:
- (b) controlling or regulating the flow of water in and from watercourses:
- (c) preventing or lessening any likelihood of the overflow or breaking of the banks of any watercourse:
- (d) preventing or lessening any damage which may be occasioned by any such overflow or breaking of the banks:
- (e) preventing or lessening erosion or the likelihood of erosion:
- (f) promoting soil conservation.

(2A) *[Repealed]*

(3) Except as expressly provided in this Act, nothing hereinafter contained shall be held to derogate from or prejudice the generality of the provisions of this section and the powers, rights, and privileges conferred by this section.

Section 126(1): replaced, on 1 October 1991, by section 362 of the Resource Management Act 1991 (1991 No 69).

Section 126(2): amended, on 26 October 1967, by section 9 of the Soil Conservation and Rivers Control Amendment Act 1967 (1967 No 32).

Section 126(2)(f): inserted, on 7 December 1945, by section 79(2) of the Statutes Amendment Act 1945 (1945 No 40).

Section 126(2A): repealed, on 1 October 1991, by section 362 of the Resource Management Act 1991 (1991 No 69).

138 Boards may apportion cost of works with owners of lands

- In any case where any works are to be constructed by a Board, the Board may agree with the owners or occupiers of any lands on or near which the works are to be constructed for the apportionment of the cost of the works in such proportions as are deemed fair and equitable by the parties.

LOCAL GOVERNMENT ACT 1974

Part 29
Land drainage and rivers clearance
501F Application of Part 29
502 This Part to be subject to Resource Management Act 1991
503 Interpretation

Land drainage areas
504 Declarations in relation to drainage areas
505 Procedure for demanding poll
505A Poll on proposed declaration
505B Petition to make declaration
505C Relevant area for polls and petitions
506 Subdivision of areas

Control of drainage channels and land drainage works
507 Existing drainage channels may be brought under this Part
508 Repeal of special Act

Powers of councils with respect to land drainage
509 Powers of council as to drainage channels and land drainage works
510 Inspection of private dams, etc

Removal of obstructions from drainage channels and watercourses
511 Removal of obstructions from drainage channel or watercourse
512 Power to require council to order removal of obstructions
513 Order of court on application under section 511 or section 512
514 Council may make advances to owners
515 Removal of obstructions in watercourses outside the district

General provisions
516 Exercise of powers on roads and public works not under control of council
517 Bylaws for protection of land drainage works

Part 29
Land drainage and rivers clearance

- Part 29: inserted, on 1 April 1980, by section 2 of the Local Government Amendment Act 1979 (1979 No 59).

501F Application of Part 29

- This Part—
  - (a) applies only in respect of—

- (i) drainage channels or land drainage works under the control of a council:
- (ii) drainage channels or land drainage works under construction by a council:
- (iii) drainage channels or land drainage works that a council has agreed to construct; and

- (b) does not apply in respect of drainage channels or land drainage works transferred by a council under Part 29A.

Section 501F: inserted, on 15 October 1999, by section 7 of the Local Government Amendment Act (No 5) 1999 (1999 No 125).

503 Interpretation

- In this Part, unless the context otherwise requires,—
council means a territorial authority
district means the district of a territorial authority
drainage area means any area constituted under this Part for land drainage purposes
drainage channel or **channel** means every passage or channel on or under the ground through which water flows, continuously or otherwise, and which—
  - (a) immediately before the commencement of this Part was a drainage channel under the control, as such, of any council; or
  - (b) is constructed by the council as a drainage channel after the commencement of this Part; or
  - (c) is vested in the council as a drainage channel;—

but does not include a navigable river, a water race as defined in section 422, or a drain as defined in section 441 or section 471
land drainage works means works of any sort for the drainage of land in the district (being works vested in the council or acquired or constructed or operated by or under the control of the council under this Part), including drainage channels for receiving water in its natural flow on or from any hills or other lands, and works diverting or damming the same to prevent its overflow on to any other lands at a lower level, as well as drainage channels for carrying off water from any land.

Section 503: inserted, on 1 April 1980, by section 2 of the Local Government Amendment Act 1979 (1979 No 59).

Powers of councils with respect to land drainage

- Heading: inserted, on 1 April 1980, by section 2 of the Local Government Amendment Act 1979 (1979 No 59).

509 Powers of council as to drainage channels and land drainage works

- (1) The council may purchase, or make and maintain, or enlarge, and from time to time alter, extend, or repair, any drainage channel or land drainage works constructed under this Part in any drainage area in the district, and for that purpose may—
  - (a) contract with the owner of any private land for and acquire from him by deed duly executed the grant in perpetuity to the council of the use, occupation, and enjoyment of that land or any part thereof for the purpose of constructing and maintaining any drainage channel or land drainage works thereon:
  - (b) make drainage channels or land drainage works upon, over, or under any land:
  - (c) make drainage channels or land drainage works over or under any road or place to which the public have general access, or through any public reserve:
  - (d) alter the course or level of any road or public place, and break up and dig into the surface thereof and stop temporarily the traffic thereon:
  - (e) make land drainage works across any stream or river but so as not to impede the navigation upon any navigable river, except under the provisions of a special Act:
  - (f) alter the course or level of any stream or river, or of any ditch or drainage channel:
  - (g) alter any drain, sewer, gas pipe, other pipe, cable, or other apparatus of any kind on or under any road or public place, whether within or outside the district, so far as is necessary for the purpose of constructing and maintaining any drainage channel or land drainage works.

(2) Section 708 shall apply with respect to the laying of drainage channels or land drainage works on private land pursuant to subsection (1).

Compare: 1928 No 21 s 265; 1956 No 64 s 230

Section 509: inserted, on 1 April 1980, by section 2 of the Local Government Amendment Act 1979 (1979 No 59).

Removal of obstructions from drainage channels and watercourses

- Heading: inserted, on 1 April 1980, by section 2 of the Local Government Amendment Act 1979 (1979 No 59).

511 Removal of obstructions from drainage channel or watercourse

- (1) Where in the opinion of the council the free flow of water in any drainage channel or in any watercourse that is not under the control of any other local authority—
    - (a) is impeded by any obstruction, and that obstruction is likely to cause loss of life, injury, or damage to property in the district or to obstruct navigation; or
    - (b) is likely to be impeded by any such obstruction,—

the council may, by notice in writing, require the occupier or, if there is no occupier, the owner of the land on the banks of the drainage channel or watercourse within the district to remove the obstruction from the drainage channel or watercourse and from the banks of the drainage channel or watercourse to a distance not exceeding 3 metres from the nearest margin of the drainage channel or watercourse.

(2) Within 10 days after service of the notice, the occupier or owner to whom the notice is given may apply to a District Court for an order setting aside the notice.

(3) On the hearing of the application, the court, whose decision shall be final, shall determine whether the notice should or should not be set aside, and in the former case the notice shall be deemed to be void.

(4) In the case of a notice which is not set aside as aforesaid, if the occupier or owner, as the case may be, fails to do any such act in compliance therewith within 1 month from the service thereof, or, where application as aforesaid has been heard, then within 1 month after the giving of the decision of the court, he commits an offence, and the council, by its officers or agents, may enter on the land and do that act.

(5) Where the council does any work under subsection (4), it may recover the cost from the occupier or owner.

(5A) Notwithstanding that no work has been carried out by the council under subsection (4), the council may recover any cost or expenses incurred by it under this section in respect of any investigations or supervision carried out by the officers or agents of the council.

(6) The said cost and expenses shall be a charge upon the land.

(7) The council may dispose of anything removed under this section in such manner as it thinks fit, and the proceeds of that disposal shall form part of its general revenues.

(8) Where a drainage channel or watercourse or the bed thereof divides 2 districts, the council on either side may exercise the powers under subsection (1) in respect of that half of the river bed adjoining the bank within its district.

(9) In this section,—

- (a) **obstruction** includes earth, stone, timber, driftwood, and material of all kinds, and trees, plants, weeds, and growths of all kinds:
- (b) the occupier or owner of land adjoining a road shall be deemed to be the occupier or owner of land on the banks of any drainage channel or watercourse running upon the road where the road fronts the land of that occupier or owner, unless the channel or watercourse has been artificially constructed by the council for the purpose only of draining the surface of the road:
- (c) **remove**, in relation to any obstruction consisting of trees, plants, weeds, or growths, includes, if the council so specifies, burning, poisoning, cutting, or treating, whether with or without the removal of the burnt, poisoned, cut, or treated portions.

(10) Nothing in this section shall be deemed to authorise any council to dispose of any timber floated down any watercourse under the Timber Floating Act 1954.

Compare: 1908 No 96 s 62; 1913 No 31 s 7; 1956 No 7 s 9(1), (3)

Section 511: inserted, on 1 April 1980, by section 2 of the Local Government Amendment Act 1979 (1979 No 59).

Section 511(2): amended, on 1 April 1980, pursuant to section 18(2) of the District Courts Amendment Act 1979 (1979 No 125).

Section 511(5A): inserted, on 15 October 1999, by section 8(1) of the Local Government Amendment Act (No 5) 1999 (1999 No 125).

Section 511(6): amended, on 15 October 1999, by section 8(2) of the Local Government Amendment Act (No 5) 1999 (1999 No 125).

512 Power to require council to order removal of obstructions

- (1) In any case where the council might give any notice under section 511(1) in respect of any land, any resident of the district may, by notice in writing, request the council to do so.

(2) If for the space of 1 month after the receipt of the last-mentioned notice the council fails to comply therewith, the resident making the request may apply to a District Court for an order requiring the council to comply with that notice.

(3) On the hearing of the application, the court shall determine whether and to what extent the notice shall be complied with by the council, and the decision of the court shall be final.

Compare: 1908 No 96 s 63

Section 512: inserted, on 1 April 1980, by section 2 of the Local Government Amendment Act 1979 (1979 No 59).

Section 512(2): amended, on 1 April 1980, pursuant to section 18(2) of the District Courts Amendment Act 1979 (1979 No 125).

REPORT 1528208

Solid Waste: Nelson – Tasman Solid Waste Composition Study

1. Purpose of Report

1.1 To provide feedback on the composition study carried out for the Nelson/Tasman landfills.

2. Recommendation

THAT the report Solid Waste: Nelson – Tasman SWAP Study (1528208) be received;

AND THAT it be noted that the high tonnage of paper/cardboard in landfills will be further investigated through the waste education contract;

AND THAT staff report back on options and costing for further Nelson-Tasman solid waste composition studies;

AND THAT the project to treat organic waste be delayed until such diversion can be economically justified.

3. Background

3.1 A composition study (SWAP – Solid Waste Analysis Protocol) of the waste disposed at York Valley and Eves Valley was carried out as part of a project funded by Nelson City Council, Tasman District Council and a Waste Minimisation Grant received from the Ministry for the Environment (MfE).

3.2 The Nelson –Tasman SWAP Studies 2012 report was received in February 2013 (Attachment 1).

3.3 The SWAP study provides a benchmark for residual waste disposed at York and Eves Valley and is a basis to inform future decisions around the management of waste streams in the Nelson/Tasman region.

3.4 The information on food waste and organic material forms the basis for the next component of the project (SWAP for Nelson – analysis of landfill digestion - MfE) which will be part funded by the grant received from the

MfE. The Deed of Grant with the MfE contains a component of reviewing the feasibility of directing separated organic waste in future to be digested with wastewater sludge (Co-digestion) at an anaerobic sludge treatment facility to be developed at the Bell Island Wastewater Treatment Plant.

4. Discussion

Joint Waste Management and Minimisation Plan

4.1 The Joint Waste Management and Minimisation Plan (JWMMP) identified that composition data surveys should be carried out for the Nelson/Tasman landfills. The Councils have provided for periodic surveys in their respective Long Term Plans.

4.2 Accurate composition data provides a sound basis for the development of waste minimisation strategies.

Comparison with National Indicators

4.3 By comparing the Nelson/Tasman composition with the national indicator sites, it becomes apparent that there are three categories of waste where significantly more waste ends up in landfills in our region.

4.4 The three categories (paper/cardboard, plastics and timber) are considered relatively high value recyclables.

4.5 More planning around these waste streams should be considered in the medium term to locate the source of the material and develop processes divert them from landfill.

4.6 A project has recently been initiated through the joint community education contract to investigate behaviour around diversion of paper/cardboard over the next year.

Composition over Time

4.7 Previous SWAP studies carried out in Nelson and Tasman are not directly or comparable to the current work, due to differing survey design of previous work.

4.8 For this reason only qualified conclusions are drawn from the most recent work, but these should be treated with a degree of caution. Section 5.4 of the attached report discusses this in some detail (Attachment 1).

4.9 To generate a reliable understanding of waste composition and trends over time it will be important to continue with a regular SWAP programme over a number of years.

Comparison between Nelson and Tasman

4.10 The survey shows significant variances for material that are being diverted from landfills in the region between Nelson and Tasman.

4.11 More garden waste is received at York Valley compared to Eves Valley and larger percentages of plastics, glass and cardboard are received at Eves Valley.

4.12 Currently there are different strategies in place in Nelson and Tasman. These are areas where improved cooperation and consistency between the two Councils could result in improved diversion of recyclable material.

4.13 There are a number of methods developed in the JWMMP through which this alignment can be achieved.

Assessment of feed stock for anaerobic digestion

4.14 While the survey indicated that putrescibles (food and garden waste) are comparable to national indicators it is significant that food waste appears to show a significant decrease over time in the Nelson area.

4.15 The survey results indicate that food waste at York Valley may have decreased from 9,000 tonnes in 2006 to 3,600 tonnes in 2012.

4.16 Food waste disposed of at Nelson/Tasman landfills is estimated at between 6,500 and 10,000 tonnes per annum.

4.17 The survey also indicated that the food waste is highly contaminated with other residual waste.

4.18 Higher level treatment of food waste is a cost intensive process. Any business decisions around separation of food waste from the waste stream for specialised treatment, such as anaerobic treatment, will have to consider the variation in tonnages.

4.19 Increased awareness of waste avoidance and home composting could further decrease the tonnages of food waste available for diversion.

4.20 Higher quality organic waste material originating from processing and agricultural activities are generally used as animal feed and do not end up in local landfills.

4.21 The anaerobic digestion feasibility study carried out by Waste Solutions Ltd for the Nelson Regional Sewerage Business Unit, included a study on importing separated organic waste as part of a co-digestion process to improve the quantity of methane to improve the economic return on investment, in 2006/07 was reviewed (Attachment 2) following the completion of the SWAP survey. It was found that:

- The tonnages of material disposed to the landfills that is suitable for co-digestion is significantly less than previously assumed.
- The co-digestion of organic waste with sewage sludge at Bell Island has the potential to be economic.

- The co-digestion option has many risks associated with gas yield estimates and the cost of collection of the putrescent waste.
- There is an increased risk of contaminated putrescent waste reducing the effectiveness of the anaerobic co-digestion.
- The review recommends a cautionary approach towards co-digestion and recommends that co-digestion should be comprehensively trialled after the implementation of anaerobic digestion to treat sewage sludge at Bell Island.
- The review indicates that a standalone anaerobic digester located at one of the landfills is much less likely to be economic than the co-digestion option.

4.22 The implementation of anaerobic digestion at Bell Island continues to be investigated as an option to improve the efficiency of sludge management by the Nelson Regional Sewerage Business Unit.

4.23 The draft Nelson District Renewable Energy Assessment dated April 2013 reports that this technology is not expected to be viable for commercial development in the next 25 years.

Cost of the SWAP Study

4.24 The total cost of the SWAP analysis came to over $133,000 and does not include staff time. (A Waste Minimisation Fund grant to the value of 70% of the cost of the project was received from the Ministry for the Environment)

4.25 Both Councils will have to review their Long Term Plans and adjust allowances for future SWAP surveys as the actual costs significantly exceed the original budgeted amounts. Based on this updated information, both Councils will need increased funding or rely on future grants from the Waste Minimisation Fund to complete these studies in future.

4.26 The high cost of SWAP surveys and the unreliable nature of Waste Minimisation Fund grants necessitate a review of these studies in future.

5. Conclusion

5.1 Without reliable information there is a considerable risk that waste minimisation initiatives that require significant capital investment could result in fruitless expenditure.

5.2 Regular SWAP studies are considered essential for the development of coherent policies around waste minimisation. However, they are expensive, and Council currently rely on Waste Minimisation Grants to complete them.

5.3 The projected quantities of quality organic waste (uncontaminated) that can be diverted from landfills are unlikely to be adequate to provide feedstock for a standalone anaerobic digester.

5.4 Co-digestion should be considered by the Council once anaerobic digestion capacity has been established in the Nelson/Tasman region. That Council should only proceed with co-digestion if a trial confirms the effectiveness of mixing diverted organic material into the feed stock of a future anaerobic digester.

Johan Thiart
Engineering Adviser

Attachments

Attachment 1: Nelson – Tasman SWAP Studies 2012 1461057

Attachment 2: Anaerobic Digestion and Biogas Fuelled Electricity Generation 1488102

Supporting information follows.

Supporting Information

1. Fit with Purpose of Local Government

Local Government Act Section 14 requires that local authorities collaborate and co-operate with other local authorities and bodies as it considers appropriate to promote or achieve its priorities and desired outcomes, and make efficient use of resources.

2. Fit with Community Outcomes and Council Priorities

Providing affordable services and promote sustainable solutions.

3. Fit with Strategic Documents

Investigation into the viability of developing a strategy to treat organic waste to inform the Activity Management Plan, 2015/16 Annual Plan and the next Nelson Long Term Plan (LTP).

4. Sustainability

The implementation will recycle waste, improve air pollution and mitigate impacts of climate change.

5. Consistency with other Council policies

The proposal is consistent with the Council's Sustainability Policy.

6. Long Term Plan/Annual Plan reference and financial impact

The development and implementation of organic waste treatment be further investigated.

7. Decision-making significance

This is not a significant decision in terms of the Council's Significance Policy.

8. Consultation

It is considered that appropriate consultation has been undertaken with the issue clearly identified in the Joint Waste Management and Minimisation Plan and the current Long term Plan.

9. Inclusion of Māori in the decision making process

Iwi is represented on the Joint Waste Working Party and have been consulted during the development of the Joint Waste Management and Minimisation Plan.

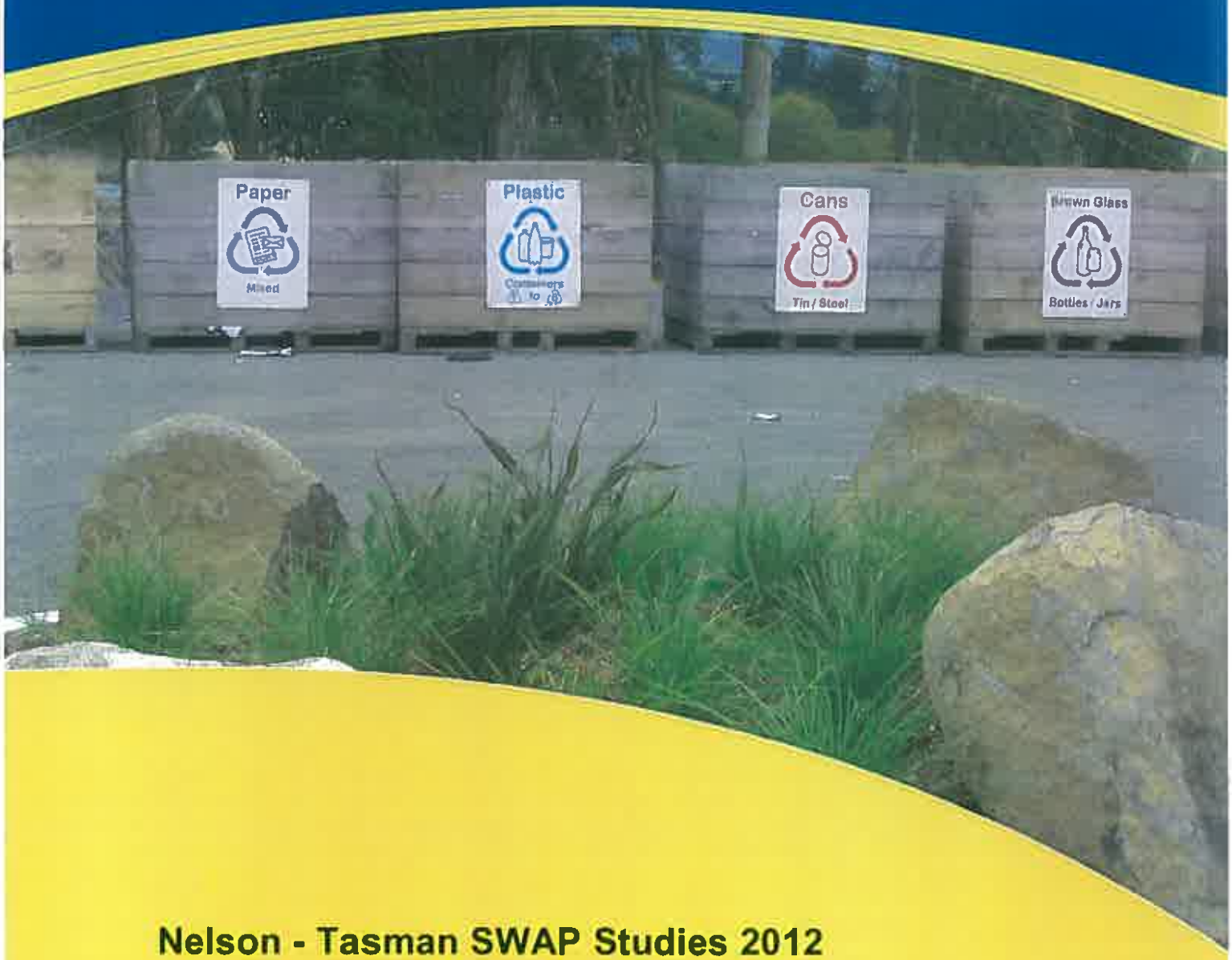
10. Delegation register reference

Decision by Council

ATTACHMENT 1

MWH

BUILDING A BETTER WORLD



Nelson - Tasman SWAP Studies 2012

Prepared for Nelson City Council and Tasman District Council

February 2013

1461057

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Nelson - Tasman SWAP Studies 2012

CONTENTS

1 Introduction 1
2 Scope 1
3 Survey Design 2
4 Survey Execution 3
4.1 Survey Periods 3
4.2 Staffing 4
4.3 Health and Safety 4
4.4 Equipment 4
4.5 Sampling Regimes and Data Collected 4
4.6 Sampling 5
4.6.1 York Valley Landfill 5
4.6.2 Richmond RRC 7
4.6.3 Mariri RRC 10
4.7 Classifications 12
5 Results 13
5.1 Sample Size 13
5.2 Uniform Loads 15
5.3 Waste Composition data 17
5.4 Precision 18
6 Discussion and Analysis 20
6.1 Tasman District waste over time 20
6.2 Nelson City Waste Over Time 21
6.3 Comparison between Sites 22
7 Summary 24

LIST OF TABLES

Table 4-1: Survey Periods in 2012 3
Table 4-2: Site Operational Hours 3
Table 4-3: Waste Categories 12
Table 5-1: Summary of Sampling during Autumn Surveys 13
Table 5-2: Summary of Sampling during Spring Surveys 13
Table 5-3: Summary of Vehicles during Survey – Nelson City 13
Table 5-4: Summary of Vehicles during Survey - Tasman District 14
Table 5-5: 2012 Waste Composition 17
Table 5-6: Precision Achieved 18

LIST OF FIGURES

Figure 3-1: Waste to Landfill 2
Figure 4-1: SWAP sampling location at York Valley Landfill 5
Figure 4-2: Sampling at York Valley Landfill 6
Figure 4-3: A typical compactor bin and compactor truck arriving at York Valley Landfill 6
Figure 4-4: Excavator and compactor used at York Valley Landfill 7
Figure 4-5: Sample placed on plastic sheet to allow fines to be collected 7
Figure 4-6: Sampling location at Richmond RRC 8
Figure 4-7: Vehicles arriving at Richmond RRC 8
Figure 4-8: Material deposited in the pit at Richmond RRC 9
Figure 4-9: Examples of samples taken at Richmond RRC 9
Figure 4-10: Sampling by survey team at Richmond RRC 10
Figure 4-11: SWAP sampling location at Mariri RRC 10
Figure 4-12: Commercial vehicles arriving at Mariri RRC 11
Figure 4-13: Material deposited in the pit at Mariri RRC 11
Figure 4-14: Examples of samples taken at Mariri RRC 11
Figure 4-15: Material being separated into its individual categories 12
Figure 5-1: Percentage of Vehicle Type sampled 14
Figure 5-2: Examples of uniform loads observed at York Valley Landfill 15
Figure 5-3: Examples of uniform loads observed at Richmond RRC 15
Figure 5-4: Examples of single categories observed 16
Figure 5-5: E-Waste observed 16
Figure 5-6: Nelson - Tasman Waste Composition 2012 17
Figure 5-7: Nelson - Tasman Waste Composition 2012 19
Figure 6-1: Tasman District Council Waste Composition over time 20
Figure 6-2: Nelson City Council Waste Composition over time 21
Figure 6-3: Comparison between sites 2012 22
Figure 6-4: Sheet glass disposed of at Richmond RRC 22
Figure 6-5: Comparison between Councils 2012 23
Figure 6-6: Nelson and Tasman Waste Composition Compared with MfE National Indicator Sites 24

APPENDICES

Appendix A Intended Sampling Regimes
Appendix B Data Sheets
Appendix C Waste Composition Data

1 Introduction

In September 2011 Nelson City Council secured funding from the Ministry for the Environment (MfE) to undertake waste composition surveys for Nelson City Council and Tasman District Council as part of the Councils' on-going investigations to assess the potential use of anaerobic digestion technology for the recovery and recycling of organic waste within the district.

As stated in the deed of funding, the purpose of the project is to "inform and empower joint waste planning for increased and improved recycling and recovering activity through common and consistent data on waste composition in two adjoining Council areas"[1].

The project consists of the following five key stages (as agreed by MfE):

1. Solid waste analysis protocol (SWAP) survey design for three locations feeding two landfill sites.
2. Execution and reporting of two rounds of surveys.
3. Determining the economic feasibility and environmental impact of anaerobic digestion.
4. Development of joint procurement plans for new waste collection, separation and disposal systems.
5. Sharing information and experience gained through this project with other Councils.

In October 2011 the first stage was completed by MWH and the report 'Waste Composition Survey Stage 1 Survey Design' was submitted to MfE by Johan Thiart (Nelson City Council).

In March 2012 the second stage commenced with the first round of SWAP surveys undertaken between 12 March and 4 April. The second round of SWAP surveys was undertaken between 4 November and 28 November.

In addition to providing data for this project, the SWAP surveys will also allow Nelson City Council and Tasman District Council to assess current waste practices and assist with the following:

- implementation of the joint Council Waste Management and Minimisation Plan
- introduction of waste minimisation initiatives
- procurement of new waste collection/ separation and disposal systems
- applying for permission to use a unique emission factor (UEF) under the new NZ Emissions trading scheme (ETS).

The SWAP surveys undertaken as part of this project are in accordance with the NZ ETS requirements and the MfE Solid Waste Analysis Protocol publication[2].

2 Scope

This report is to satisfy Stage 2 of the MfE deed of funding.

The scope of this report is to:

- provide a summary of the data recorded during the SWAP studies in 2012
- assess the precision achieved by the studies, and
- compare the results between sites, council areas, overtime and with the National Indicator Sites.

[1] Ministry for the Environment (2011), Deed of Funding, MfE, NZ
[2] Ministry for the Environment (2002), Solid Waste Analysis Protocol, MfE, NZ

3 Survey Design

In determining the best way to standardise the survey methodology for Nelson City Council and Tasman District Council, the patterns of waste flow were considered, and in particular, the differences between the areas assessed.

In Tasman district:

- only special waste goes directly to landfill (7%)
- 60% of waste goes to Richmond Resource Recovery Centre (RRC)
- 24% of waste goes to Mariri RRC
- 7% of waste goes to Takaka RRC
- the remaining balance of waste is to Collingwood RRC and Murchison RRC.

Richmond RRC and Mariri RRC have weighbridges and the tonnage of all commercial loads is recorded at these RRCs. Waste and material deposited at Takaka RRC, Collingwood RRC and Murchison RRC is generally recorded by volume. The total amount of waste deposited at the Eves Valley Landfill from each site is weighed and the tonnage recorded.

In Nelson City:

- 22% of waste goes to the Pascoe Street Transfer Station – this is generally in small vehicles
- 78% of waste goes directly to the York Valley Landfill- this is derived from 30% domestic collection and 48% commercial waste.

York Valley Landfill has a weighbridge, but there is no weighbridge at the Pascoe Street Transfer Station.

To ensure that specific waste sources were analysed as part of the 2012 survey, then it was important that flow of waste was understood and that the SWAP studies were undertaken at each of the main sites so that a representative sample of what is being disposed of is achieved.

The total tonnage of waste disposed of since July 2001 to the York Valley Landfill (Nelson City) and the Eves Valley Landfill (Tasman district) is shown in Figure 3-1.

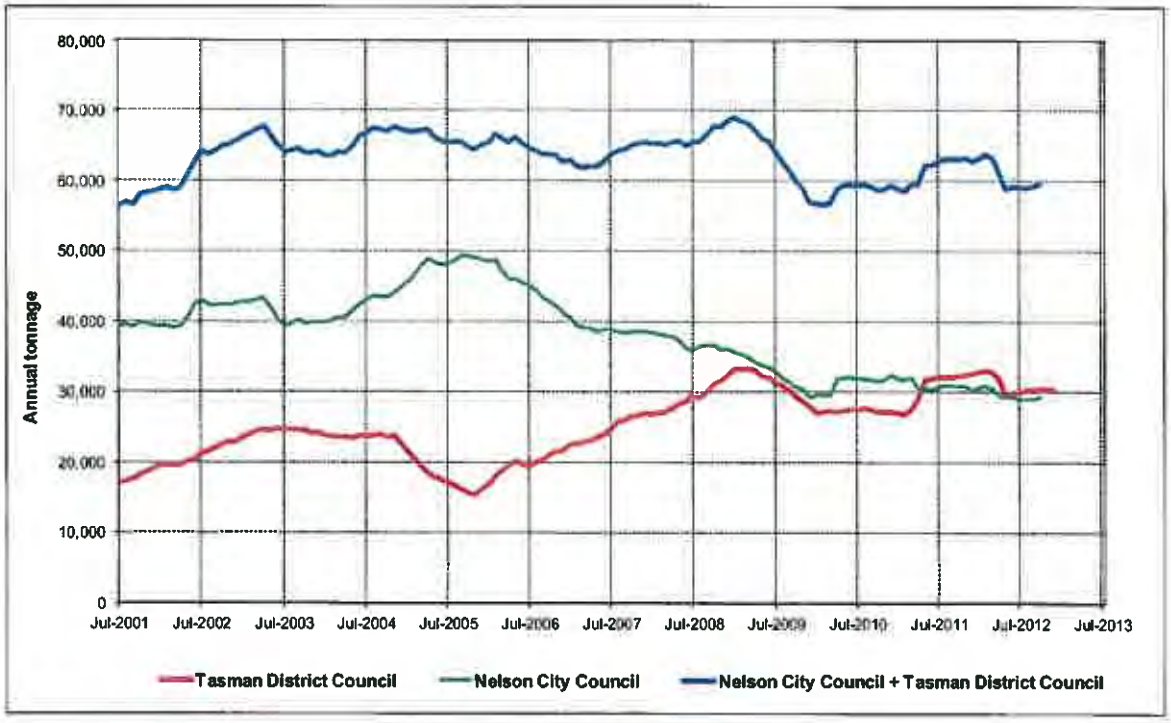

Figure 3-1: Waste to Landfill

During the 2011/12 financial year at total of 59,200 tonnes of waste was disposed of at York Valley and Eves Valley landfills with approximately 50% of material deposited at each site.

For Tasman District Council it would be difficult for waste received at Eves Valley to be analysed for each waste source. This is due to the fact that waste is bulked up and mixed at the RRC before being sent to the landfill. The analysis of waste at Richmond RRC only, would not result in waste from other areas of the district being taken into consideration and therefore waste was also analysed at the Mariri RRC to cover the majority of the waste produced in the Tasman District.

For Nelson City Council, as waste can be delivered directly to the landfill site and would not be taken into account if the SWAP studies were undertaken only at the Pascoe Street Transfer Station, the survey was undertaken at York Valley Landfill.

In summary, SWAP surveys were carried out at the following sites:

- York Valley landfill in Nelson City
- Richmond Resource Recovery Centre (RRC) in Tasman District
- Mariri Resource Recovery Centre (RRC) in Tasman District

These sites were selected as the best locations to sample and assess the waste streams in the two council areas. The following sections provide a summary of the methodology that was undertaken by MWH and highlights some of the site specific procedures adopted.

4 Survey Execution

For waste planning purposes it is important that the approaches to waste composition analysis are standardised between Councils so that results recorded can be compared. To ensure this, the sampling and sorting procedures described in procedure 2 of the MfE Solid Waste Analysis Protocol publication and included in the 'Waste Composition Survey Stage 1 Survey Design' report have been used at all sites as part of the surveys.

4.1 Survey Periods

The first round of SWAP surveys were undertaken between 12 March and 4 April 2012 and the second round of SWAP surveys were undertaken between 5 November and 28 November 2012. The following table shows the survey period at each site.

Table 4-1: Survey Periods in 2012

Site	First Round	Second Round
York Valley Landfill	12 – 17 March	5 – 10 November
Richmond RRC	21 – 27 March	13 – 19 November
Mariri RRC	29 March – 4 April	22 – 28 November

The surveys were carried out during site operational hours, shown in Table 4-2 below.

Table 4-2: Site Operational Hours

Site	Opening Hours
York Valley Landfill	8.00am - 4.30pm Monday to Friday, and 12noon - 4.00pm on Saturday. This site is closed on Sunday.
Richmond RRC	8.00am to 5.00pm, Monday to Sunday inclusive
Mariri RRC	9.00 am to 4.00pm, Monday to Saturday and 1.00pm to 4.00pm on Sunday

4.2 Staffing

In addition to one MWH staff member being on site at all times, the surveys were undertaken by three other staff who were familiar with waste having previously worked on the sorting lines were provided by Allied Work Force through a local waste operator, Nelmac. These staff received onsite training in the following areas, prior to the surveys commencing:

- purpose and objectives of the survey
- survey procedures
- waste classifications and categorisation of common and multi-material wastes
- familiarisation with site and equipment
- dealing with the users of the landfill site or RRCs, including confidentiality issues
- emergency procedures.

The previous experience of the Allied Work Force staff was beneficial in ensuring that correct sorting procedures were followed and in being able to categorise materials into their different categories. It also meant that staff had an awareness of why they were involved in the project. The same staff were used for both rounds of surveys, with an addition staff member provided by Allied Work Force staff on a standby basis in case needed.

4.3 Health and Safety

To ensure health and safety was maintained throughout the project, all staff were also required to complete a health and safety induction from the site operators prior to commencing work on site. All waste samplers were required to have up to date relevant inoculations. A first aid kit was available to the survey team, along with antiseptic soap and water for washing.

Care had to be taken around site machinery as the sampling procedure involved working closely with the excavator or loader. Everyone looked out for each other well and no major incidents occurred during either survey period.

4.4 Equipment

The following equipment was used to undertake the survey:

- electronic weigh bars scale (accurate to 0.1kg)
- gazebo for weather protection
- heavy duty plastic sheeting
- vehicle for transport and running the scales
- brush and shovels for sorting through waste and cleaning the sorting area at the end of the day
- waste containers / recycling bins to place material in after it has been sorted
- appropriate personal protective equipment, including gloves, safety clothing, dust masks, glasses, high visibility vests, safety footwear etc.
- hand wipes and other cleaning products
- first aid kit.

Shovels were borrowed from the site operators and a loader / excavator used by the site operator to provide assistance in moving large items and sampling loads.

4.5 Sampling Regimes and Data Collected

The number of vehicles intended to be surveyed at each site was determined prior to the surveys commencing. A copy of the sampling regimes designed for York Valley Landfill, Richmond RRC, and Mariri RRC are included in Appendix A. These sampling regimes detailed the number of cars, domestic rubbish bag trucks, skips and 'other trucks' to be sampled at each site and the frequency of selection of vehicles.

The sampling regimes were reviewed between the first and second rounds of survey but were not altered as sufficient numbers of each vehicle type were being surveyed.

Data was recorded by filling out pre-prepared data sheets which requested the following information:

- vehicle ID number (given by the site operator)
- time
- day
- type of vehicle
- the source of the waste (municipal solid waste / commercial and industrial / building and demolition / other sources)
- the weight of each of the subcategories of waste.

The site sheets were modified from those provided in the 'Waste Composition Survey Stage 1 Survey Design' report to allow for all the main categories and sub categories highlighted in section 4.7 to be recorded separately. The site sheets were also modified slightly between surveys to make it easier for the survey team to record vehicle details. Specific regular vehicle types and customers recorded during the first round were pre-loaded into the form and could be 'ticked' rather than entering the data separately every time.

These changes worked well and allowed the data collected on site to be easily matched with the weighbridge data. Examples of the revised forms that were used are provided in Appendix B.

The following information was provided by Nelson City Council and Tasman District Council from the weighbridge records for each vehicle:

- the total weight of the vehicle
- tare weight
- net weight of the vehicle.

4.6 Sampling

Details of the sampling procedures used at each site are provided in sections 4.6.1 – 4.6.3 below.

4.6.1 York Valley Landfill

The first York Valley Landfill SWAP survey was undertaken from Monday 12 March to Saturday 17 March 2012 inclusive and the second was undertaken from Monday 5 November to Saturday 10 November 2012 inclusive.

The waste was sorted within a designated area close to the active tipping face but away from daily operations. The location had to be moved between the first and second surveys due to the fact that landfill operations had progressed to a different part of the landfill. Figures 4-1 and 4-2 show the location and setup at York Valley Landfill during each survey period.

Figure 4-1: SWAP sampling location at York Valley Landfill

Figure 4-2: Sampling at York Valley Landfill

The sorting area was close to the tipping face so that material could be placed in a pile after analysis and disposed of into the landfill on an on-going basis by the site operator. The surveys impacted slightly on the daily operations of the site but the site operator worked well with the survey team to ensure a 'representative' sample was obtained from sampled vehicles.

York Valley Landfill is not open to the general public and therefore the types of vehicles using the site were limited to truck and trailer units, compactor trucks, open trucks or skip trucks. In general, material from the Nelson City Council Pascoe Street Transfer Station arrived in a compactor bin, municipal and light commercial waste arrived in compactor trucks, and industrial and building material arrived in skips. Figure 4-3 shows examples of some of the vehicle types sampled.

Figure 4-3: A typical compactor bin and compactor truck arriving at York Valley Landfill

To limit the impact on daily operations, customers using the site deposited their waste as normal. A member of the survey team approached the selected vehicle and obtained the driver's weighbridge tag details so the data collected could be compared to the weighbridge data at a later stage.

A representative sample of the waste deposited was then collected by the site operator using the excavator bucket and taken to the sorting area for analysis.

Figure 4-4: Excavator and compactor used at York Valley Landfill

At the sorting area, the load was tipped onto a plastic sheet and from here was moved onto the table where it was sorted and weighed. The use of the plastic sheet allowed the fines to be brushed up at the end of each sampling and sorted into their appropriate categories.

Figure 4-5: Sample placed on plastic sheet to allow fines to be collected

To ensure that sufficient numbers of vehicles were sampled, up to four separate loads were stored at the sorting area at any one time. This approach worked well and ensured there was always material available for sorting. The sampling location meant that the survey team could work closely with the site operator and ensure the survey worked as efficiently as possible.

4.6.2 Richmond RRC

The first Richmond RRC SWAP survey was undertaken from Wednesday 21 March to Tuesday 27 March 2012 inclusive and the second was undertaken from Tuesday 13 November to Monday 19 November 2012 inclusive.

Waste was sorted on the concrete pad on the southern side of the tipping pit. This area is not open to the public and commercial trucks.

Figure 4-6: Sampling location at Richmond RRC

At the Richmond RRC, large vehicles entering the site are required to be weighed or produce a weighbridge docket before disposing of any material. The vehicle registration number of any sampled vehicles was recorded so that the data collected could be compared to the weighbridge records.

Generally domestic vehicles are not weighed at the Richmond RRC and therefore during the first round of surveys 100% of the load from selected domestic vehicles was analysed. Temporary changes to the traffic layout at the Richmond RRC were made during the second round of surveys to require all vehicles to be weighed in and out of the site. This allowed for representative samples to be taken from domestic vehicles as well as commercial vehicles.

Figure 4-7: Vehicles arriving at Richmond RRC

The types of large vehicles using the site were similar to those seen at the York Valley Landfill with some vehicles using both the York Valley Landfill and the Richmond RRC sites. In general, the large vehicles were either compactor trucks, open trucks or skip trucks. Municipal and light commercial waste typically arrived in compactor trucks, and industrial and building material arrived in open trucks or skips. Domestic vehicles included cars, vans, utes and trailers.

To limit the impact on daily operations, customers using the site deposited their waste as normal into the tipping pit as shown in Figure 4-8.

Figure 4-8: Material deposited in the pit at Richmond RRC

Once the waste was in the tipping pit a 'representative' sample was taken by the site operator using the loader bucket and brought over to the sorting area for analysis. The location of the sorting area allowed for the easy disposal of waste back into the tipping pit after analysis.

Figure 4-9: Examples of samples taken at Richmond RRC

Initially at the sorting area, the load sample was tipped onto a plastic sheet and then moved onto the table where it was sorted and weighed. A number of seagulls visit the Richmond RRC site and so the procedure had to be changed and the sample deposited directly onto the concrete pad and covered with the plastic sheet to keep the gulls away. Covering the material with the sheet also helped to limit the amount of litter generated on windy days. The fines were still easily brushed up from the concrete pad at the end of each sampling and sorted into their appropriate categories.

Up to three separate loads were stored at the sorting area to ensure that sufficient numbers of vehicles were sampled and that there was always materials available for sorting. This approach worked well and the sampling location meant that the survey team could work closely with the site operator. The need for the loader to be used for other tasks around the site meant that the site operator was not always available to take samples. When this situation arose, the sampling team would need to enter the tipping pit to collect a sample as shown in Figure 4-10. This was not always possible due to the nature of the material deposited or other vehicles arriving. If a sample could not be taken prior to other material being deposited on top, this vehicle was not sampled. The pit was cleared as soon as was practicable and the next available vehicle was then sampled. This generally affected domestic vehicle sampling rather than the commercial trucks as the pit was often cleared ahead of a large load arriving.

Figure 4-10: Sampling by survey team at Richmond RRC

While the gazebo provided good protection from the sun it had to be weighted down during windy days and did not stop material from the sorting area being blown away. A number of litter collections had to be undertaken during windy days to ensure the area remained tidy.

4.6.3 Mariri RRC

The first Mariri RRC SWAP survey was undertaken from Thursday 29 March to Wednesday 4 April 2012 inclusive and the second was undertaken from Thursday 22 November to Wednesday 28 November 2012 inclusive.

The waste was sorted on a concrete pad on the western side of the tipping pit and this area was closed off to the public during the survey. This area also allowed easy disposal of waste back into the pit after analysis.

Figure 4-11: SWAP sampling location at Mariri RRC

Like Richmond, large vehicles entering the Mariri RRC are required to be weighed or produce a weighbridge docket before disposing of any material. The vehicle registration number of any sampled vehicles was recorded so that the data collected could be compared to the weighbridge records at a later stage. Domestic vehicles are not currently weighed at the Mariri RRC and it was not practical to change the traffic layout at this site to weigh all vehicles in and out. 100% of the load from selected domestic vehicles was therefore analysed during both surveys.

The types of large vehicles using the site were similar to those seen at the York Valley Landfill and Richmond RRC site, although there are generally more transactions of smaller loads at Mariri RCC. Figure 4-12 shows some of the commercial vehicles using the site.

Figure 4-12: Commercial vehicles arriving at Mariri RRC

To limit the impact on daily operations, customers using the site deposited their waste as normal into the tipping pit as shown in Figure 4-13.

Figure 4-13: Material deposited in the pit at Mariri RRC

Once the waste was in the tipping pit a 'representative' sample, or the entire load for selected domestic vehicles, was taken by the site operator using the excavator and brought over to the sorting area for analysis.

Figure 4-14: Examples of samples taken at Mariri RRC

To ensure that sufficient numbers of vehicles were sampled and that there was always material available for sorting, up to four separate loads could be stored at the sorting area. Loads were covered with plastic sheeting to minimise the amount of flies and bees attracted to the material. This approach worked well and the sampling location meant that the survey team could work closely with the site operator.

The need for the operator to undertake other tasks around the site meant that the site operator was not always available to take samples. When this situation arose the sampling team would need to enter the tipping pit to collect a sample. This was not always possible due to nature of material deposited and the fact that Mariri is a busy site so other vehicles would soon arrive and cover over the load to be sampled. As at Richmond RRC, if a sample could not be taken prior to other material being deposited on top, this vehicle was not sampled. The pit was cleared as soon as was practicable and the next available vehicle was then sampled.

4.7 Classifications

Once a representative sample had been taken by the site operator, the samples were sorted into designated crates or wheelie bins, lifted onto the digital scales and the weight recorded at the end of the sample, or when full.

Figure 4-15: Material being separated into its individual categories

To ensure that the data collected can be used for as many applications as possible in the future, the samples were sorted into the following 20 categories and then combined back into the 14 main categories for reporting purposes here.

Table 4-3: Waste Categories

Main Categories	Subcategories
Cardboard	
Ferrous metals	Steel cans Other ferrous metals
Putrescibles - Food waste	
Putrescibles - Garden waste	
Glass	
Nappies and sanitary	
Non-ferrous metals	Aluminium cans Other non-ferrous metals
Paper	Newsprint, Office paper Other paper
Plastics	Type 1 plastics Type 2 plastics Other plastics
Potentially hazardous	
Rubber	
Rubble / concrete / soil / polystyrene	
Textiles	
Timber	

Any waste identified as potentially hazardous was only handled if it was safe to do so (such as batteries, paint, chemical containers etc.). Bags received from medical facilities or nursing homes containing drips and colostomy bags were not sorted and the whole bag was classified as 'potentially hazardous'.

5 Results

5.1 Sample Size

As part of the autumn round of SWAP surveys (March/April) there were 217 vehicles sampled out of the 221 intended to be sampled as set out in the sampling regimes in Appendix A. The number of vehicles sampled at each site is set out in Table 5-1 below. The average amount of material analysed during the autumn survey round was 168kg per vehicle.

Table 5-1: Summary of Sampling during Autumn Surveys

Site	Number of Vehicles Sampled	Intended Number of Vehicles to be Sampled	Total Sample Weight
York Valley Landfill	81	91	16,074
Richmond RRC	78	70	14,037
Mariri RRC	58	60	6,430

As part of the spring round of SWAP surveys (November) there were 360 vehicles sampled. The number of vehicles sampled at each site is set out in Table 5-2 below. The average amount of material analysed during the spring survey round was 118kg per vehicle.

Table 5-2: Summary of Sampling during Spring Surveys

Site	Number of Vehicles Sampled	Intended Number of Vehicles to be Sampled	Total Sample Weight
York Valley Landfill	94	91	17,620
Richmond RRC	130	70	12,848
Mariri RRC	136	60	11,914

The number of each vehicle type using each site and the total number sampled at each site is shown in Table 5-3 and Table 5-4. So that the survey data can be easily compared with the gate records the vehicle descriptions used in this report are those used in the weighbridge software at each site, therefore the vehicle types recorded vary slightly between Nelson City and Tasman District.

Table 5-3: Summary of Vehicles during Survey – Nelson City

		Nelson City (York Valley Landfill)	
		No. of Vehicles using the Site	No. of Vehicles Sampled
Autumn Survey Period	Compactor	83	29
	Open Truck	32	8
	Skips and Mini Bins	78	31
	Transfer Station	15	12
	Truck and Trailer	3	1
Spring Survey Period	Compactor	95	42
	Open Truck	30	21
	Skips and Mini Bins	72	20
	Transfer Station	13	7
	Truck and Trailer	4	4
Combined Survey Period	Compactor	178	71
	Open Truck	62	29
	Skips and Mini Bins	150	51
	Transfer Station	28	19
	Truck and Trailer	7	5

Table 5-4: Summary of Vehicles during Survey - Tasman District

		Richmond RRC		Mariri RRC		Tasman District Total	
		No. of Vehicles using the Site	No. of Vehicles Sampled	No. Vehicles using the Site	No. of Vehicles Sampled	No. of Vehicles using the Sites	No. of Vehicles Sampled
Autumn Survey Period	Compactor	55	31	30	8	85	39
	Domestic Vehicle	162	22	176	17	338	39
	Domestic Vehicle and Trailer	166	5	132	4	298	9
	Open truck	18	4	20	7	38	11
	Skip and Mini Bins	40	16	36	22	76	38
Spring Survey Period	Compactor	62	49	47	27	109	76
	Domestic Vehicle	177	31	246	65	423	96
	Domestic Vehicle and Trailer	142	21	182	8	324	29
	Open truck	27	8	17	18	44	26
	Skip and Mini Bins	73	21	85	18	158	39
Combined Survey Period	Compactor	117	80	77	35	194	115
	Domestic Vehicle	339	53	422	82	761	135
	Domestic Vehicle and Trailer	308	26	314	12	622	38
	Open truck	45	12	37	25	82	37
	Skip and Mini Bins	113	37	121	40	234	77

The overall amount of each vehicle type sampled as a percentage of the total amount of waste disposed of during the sample period is shown in Figure 5-1.

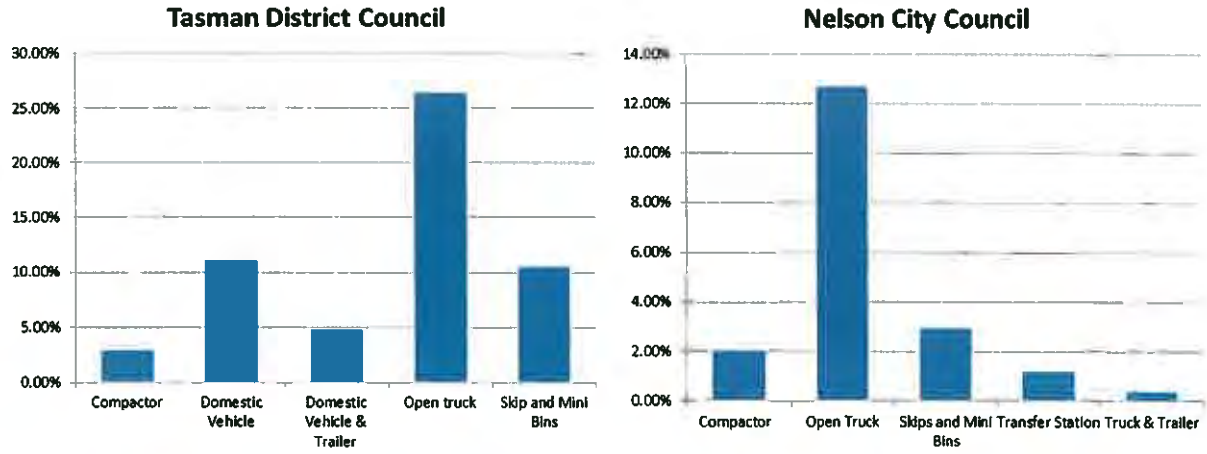

Figure 5-1: Percentage of Vehicle Type sampled

5.2 Uniform Loads

A number of uniform loads were observed at each of the sites during the sample period. At York Valley landfill this included one load of red sand from a restoration project, screenings from the WWTP which were decomposed and not possible to separate, a number of loads of rejected salmon, one load of unwanted books, and a number of loads of single sheets of glass from a local glass manufacturer. Figure 5-2 shows examples of the types of single loads observed.

Figure 5-2: Examples of uniform loads observed at York Valley Landfill

At Richmond RRC, single loads of glass from a local glass manufacturer were also observed along with skips full of timber. These are shown in Figure 5-3.

Figure 5-3: Examples of uniform loads observed at Richmond RRC

As well as uniform loads, a number of loads contained a high proportion of a single category. This included large volumes of cardboard, plastic bottles, packaged meats, plastic wrapping and vegetables such as tomatoes and apples. Figure 5-4 shows examples of the types of single categories observed.

Figure 5-4: Examples of single categories observed

Observations during the second round of surveys also noted an increase in the amount of televisions and electronic materials being disposed of as shown in Figure 5-5.

Figure 5-5: E-Waste observed

5.3 Waste Composition data

Table 5-5 shows the combined waste composition for 2012 for each of the sites surveyed, Council areas and the combined region. Tables showing the waste composition for the spring and autumn surveys are provided in Appendix C.

Table 5-5: 2012 Waste Composition

Category	Tasman District			Nelson City	
	Mariri RRC	Richmond RRC	Mariri – Richmond Combined	York Valley Landfill	Nelson - Tasman
Paper	13.0%	8.0%	9.6%	9.8%	9.7%
Cardboard	6.3%	9.6%	8.6%	5.9%	7.1%
Plastics	15.0%	15.2%	15.1%	11.8%	13.4%
Food waste	12.8%	16.5%	15.4%	12.2%	13.7%
Garden Waste	12.6%	8.6%	9.8%	17.1%	13.8%
Ferrous Metals	4.6%	1.9%	2.8%	2.8%	2.9%
Non Ferrous Metals	0.7%	0.8%	0.8%	1.8%	1.3%
Glass	3.2%	11.9%	9.2%	3.6%	6.2%
Textiles	5.7%	4.1%	4.6%	7.1%	5.9%
Nappies and Sanitary	3.5%	3.5%	3.5%	1.7%	2.5%
Rubble/concrete/soil	7.0%	3.6%	4.6%	7.4%	6.1%
Timber	10.8%	12.0%	11.6%	15.9%	13.9%
Rubber	4.0%	2.2%	2.7%	1.9%	2.3%
Potentially Hazardous	0.9%	2.1%	1.7%	1.1%	1.4%

The overall Nelson - Tasman waste composition recorded during the 2012 surveys is shown in Figure 5-6. Graphs showing the waste composition for individual sites are provided in Appendix C.

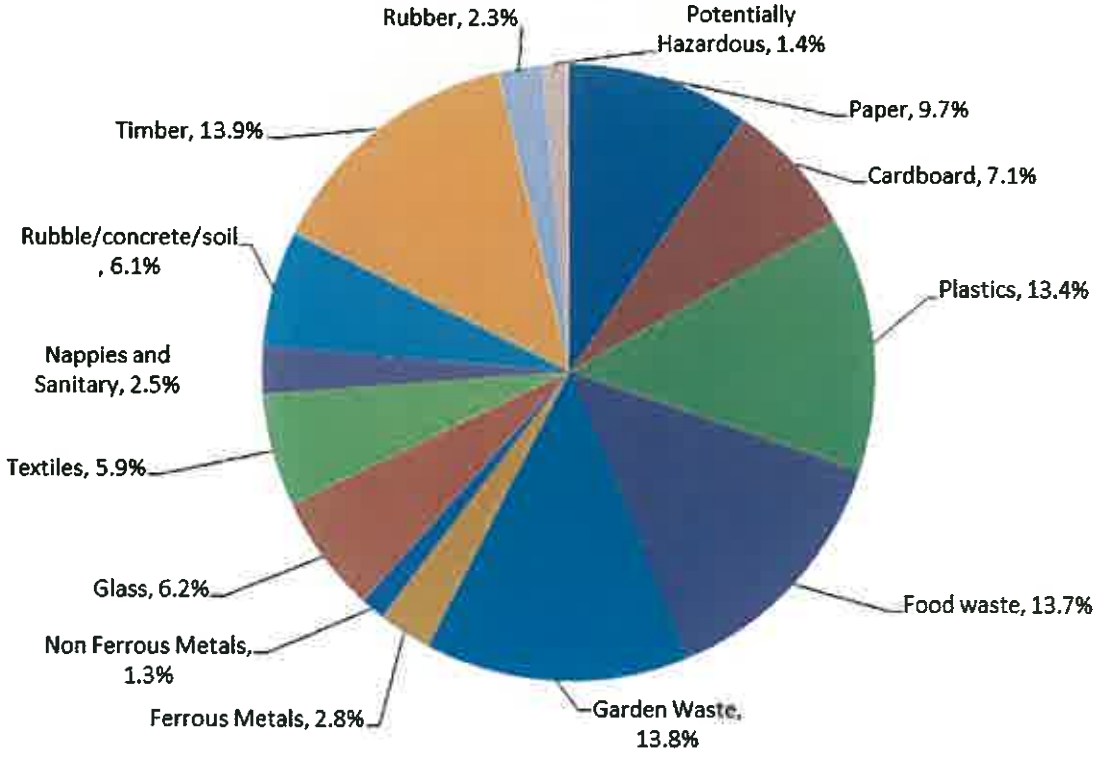

Figure 5-6: Nelson - Tasman Waste Composition 2012

5.4 Precision

Understanding the difference between accuracy and precision is important. The accuracy of a measurement as set out in the SWAP protocol refers to "how close the estimated value is to the true value; that is, how much 'bias' there is in the reported result". The precision of a measurement system as set out in the SWAP protocol is "a measure of the variability of estimates of a measure. For instance, a very large sample could yield an estimated annual paper component of 26.2 ± 0.2% (95% confidence interval). This would be very precise"[3].

To understand the likelihood that the results would be repeated if the survey was undertaken again, the precision achieved by each of the surveys and overall was calculated. Table 5-6 provides a summary of the precision achieved for the overall Tasman District data, the Nelson City data and the combined Nelson-Tasman data.

Table 5-6: Precision Achieved

Category	Tasman Composition	95% Confidence Interval	Nelson Composition	95% Confidence Interval	Nelson-Tasman Composition	95% Confidence Interval
Paper	9.6%	± 1.7%	9.8%	± 4.0%	9.7%	± 1.7%
Cardboard	8.6%	± 1.7%	5.9%	± 3.0%	7.1%	± 1.2%
Plastics	15.1%	± 2.2%	11.8%	± 1.9%	13.4%	± 2.0%
Food waste	15.4%	± 2.7%	12.2%	± 3.1%	13.7%	± 2.5%
Garden Waste	9.8%	± 2.7%	17.1%	± 4.8%	13.8%	± 2.8%
Ferrous Metals	2.8%	± 1.3%	2.8%	± 1.0%	2.8%	± 0.7%
Non Ferrous Metals	0.8%	± 0.3%	1.8%	± 0.9%	1.3%	± 0.6%
Glass	9.2%	± 3.4%	3.6%	± 2.4%	6.2%	± 1.7%
Textiles	4.6%	± 1.1%	7.1%	± 3.0%	5.9%	± 1.6%
Nappies and Sanitary	3.5%	± 0.9%	1.7%	± 0.6%	2.5%	± 0.6%
Rubble/concrete/soil	4.6%	± 1.6%	7.4%	± 2.6%	6.1%	± 1.9%
Timber	11.6%	± 3.3%	15.9%	± 4.0%	13.9%	± 3.2%
Rubber	2.7%	± 1.4%	1.9%	± 0.9%	2.3%	± 0.9%
Potentially Hazardous	1.7%	± 0.7%	1.1%	± 0.5%	1.4%	± 0.5%

The waste composition and 95% confidence intervals achieved during the 2012 surveys is shown in graphical form in Figure 5-7 below. Any significant variations recorded for each of the sites is discussed in more detail in Section 5.

[3] Ministry for the Environment (2002), Solid Waste Analysis Protocol, MfE, NZ

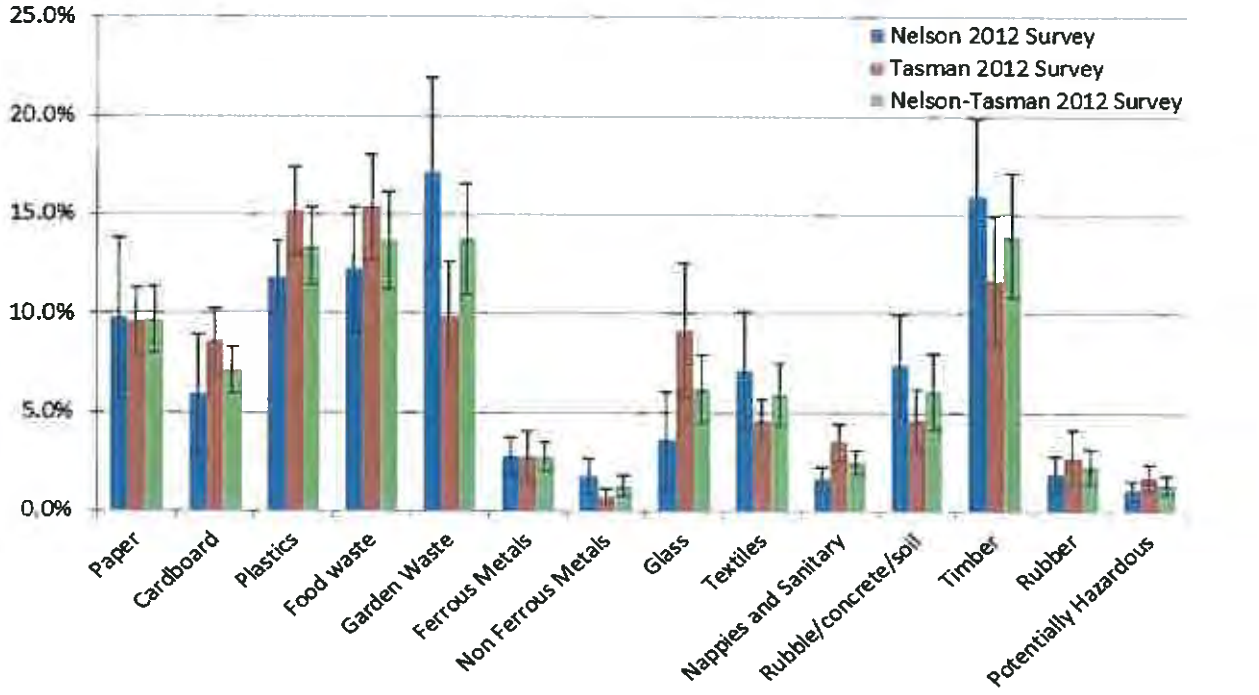

Figure 5-7: Nelson - Tasman Waste Composition 2012

6 Discussion and Analysis

6.1 Tasman District waste over time

Waste composition surveys have been previously undertaken in Tasman District in 2004 and 2007. In that period since 2004 there have been notable changes to waste management practices in the District. In 2004, Tasman District Council introduced a recycling bin scheme to the district, starting in Richmond and spreading out over a large percentage of the district by 2005. All of those customers who previously had access to a domestic waste collection service were provided with a recycling bin and the domestic waste and recycling bins are collected and emptied once a week.

Before this initiative was introduced, no domestic recycling collection services were available. The Tasman District Council bag size also reduced in size from 60 to 45 litres at this time (max weight of 14kg reduced to 12kg). This reduction in size coincided with the gradual introduction of the private domestic wheelie bin services in the district (although this service does not cover all rural areas).

In June 2011 the Tasman District Council reintroduced the larger 60 litre yellow bags. Upgrades to the Richmond RRC and Mariri RRC to encourage recycling have also been made and waste disposal rates have risen from $22.50 per tonne in 2004 to $117 - $134 per tonne in 2012.

Figure 6-1 shows the changes in the assessed waste composition for Tasman District since 2004. It should be noted that both the 2004 survey and the 2007 survey were carried out over a single week. The 2004 survey was conducted in September (spring) and the 2007 survey was conducted in June (winter). The 2007 survey also included a combination of weight and visual assessments, with visual inspections being made of all skips entering the site. The 2004 and 2007 waste compositions are for the sampled vehicles only and have not been scaled to reflect the overall proportions and numbers of different vehicle types using the site. Comparison of the results of the 2012 survey to the earlier surveys therefore cannot be done with any certainty. However, for the purposes of this report, it is assumed that the sample taken during these surveys is representative of all vehicles using the site.

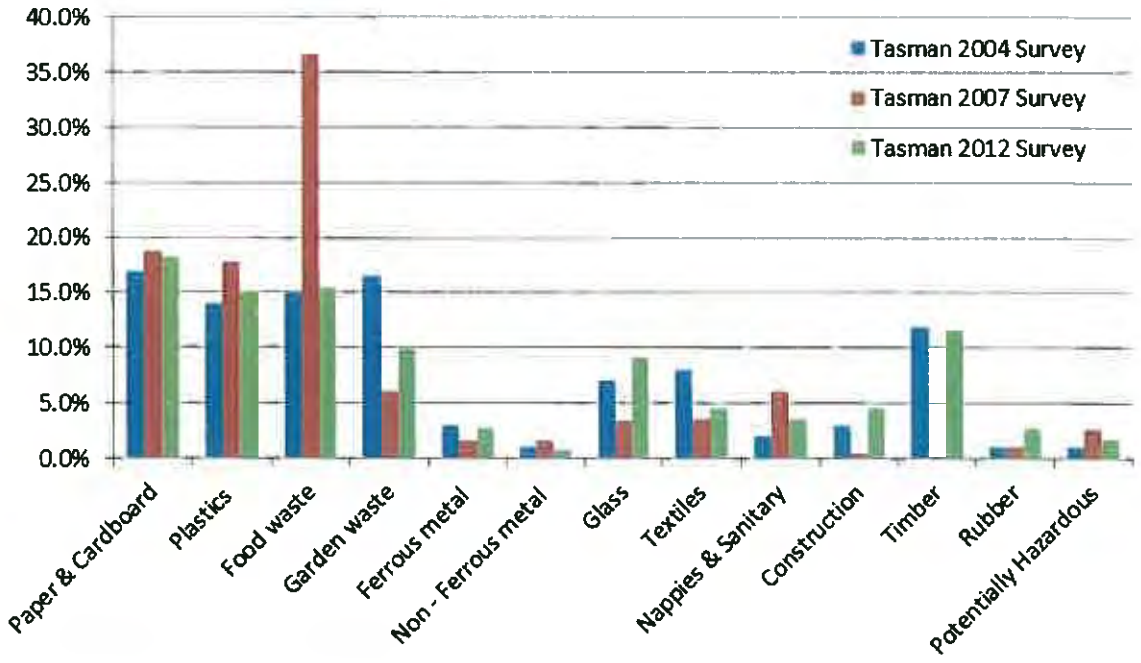

Figure 6-1: Tasman District Council Waste Composition over time

There is considerable variability in the surveyed proportions of putrescibles (food and garden waste) however, the 2012 SWAP results show an overall decrease of putrescibles in the waste stream from 31% in 2004 and 43% in 2007 to 25% in 2012.

The percentages for paper and cardboard and for plastics are relatively consistent across the surveys however, there is greater variability in the proportion of the minor constituents.

Construction material and timber in 2012 (5% and 12% respectively) is similar to the 2004 (3% and 12% respectively). The equivalent materials included in the 2007 data (0.5% and 0.2% respectively) only include the waste that was sampled by weight. The visual inspection data of skips included more construction waste and therefore is likely to increase this percentage considerably if included.

6.2 Nelson City Waste Over Time

In Nelson City residents have access to a weekly council-facilitated domestic refuse collection and disposal service. This service is a user pays service and customers can purchase:

- blue plastic 65 litre bags that are available for purchase at most supermarkets and from Council, or
- bins that can be rented or purchased from the Nelmac that require prepaid liners.

There are also a number of private collectors offering a range of services and bins both in Nelson City and Tasman District which customers can chose to purchase instead.

In November 2004 Nelson City Council introduced a weekly kerbside 55 litre crate-based recycling collection service to almost all properties. This recycling collection service alternates between glass and "the rest" fortnightly.

A previous survey of waste composition in Nelson was undertaken in 2006. Figure 6-2 shows the changes in waste composition data for Nelson city since 2006.

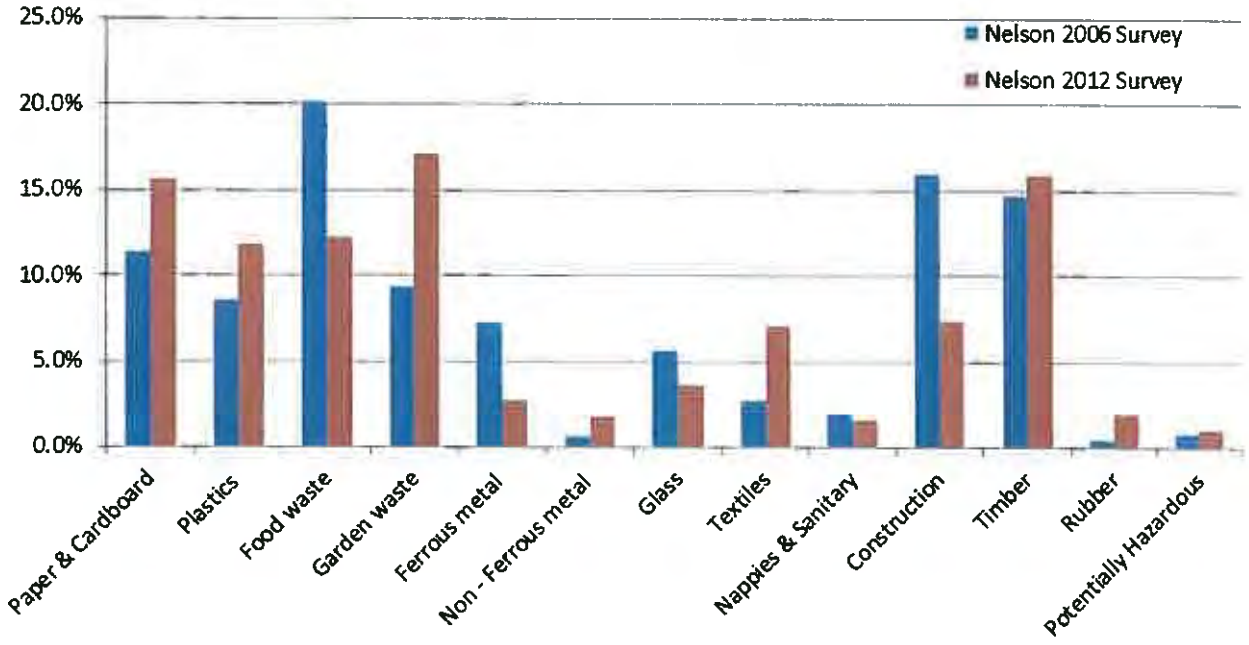

Figure 6-2: Nelson City Council Waste Composition over time

It should be noted that the 2006 survey was carried out over a single week and was based on visual assessments using tonnage conversion factors. The 2006 survey has not been scaled to reflect the total amount and vehicle types using the site. Like in Tasman District comparison of the results of the 2012 survey to the earlier surveys cannot be done with any certainty. However, for the purposes of this report, it is assumed that the sample taken during the 2006 survey is representative of all vehicles using the site.

The 2012 SWAP results show an increase in paper and cardboard and plastics (16% and 12% respectively) from the 2006 percentages of 11% and 9% respectively. Textiles have increased from 3% in 2006 to 7% in 2012. The total amount of putrescibles (food and garden waste) has remained around 29% and timber around 15%. Construction material percentages have reduced from 16% to 7%, ferrous metal from 7% to 3% and glass from 6% to 4%.

6.3 Comparison between Sites

Mariri and Richmond RRC's provide recycling facilities on site to encourage the recovery of material prior to waste entering the pit and being sent to Eves Valley Landfill. The York Valley Landfill is the final disposal point and any recycling happens offsite.

Figure 6-3 shows the differences in waste composition data between each site.

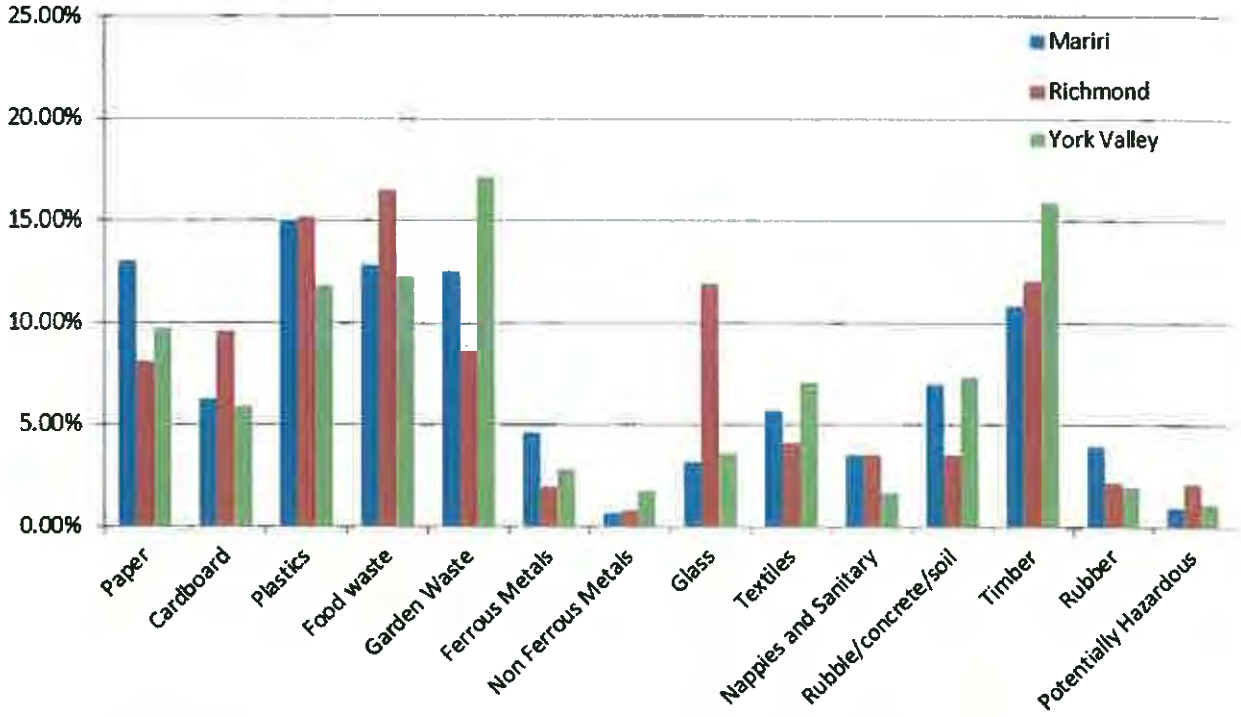

Figure 6-3: Comparison between sites 2012

From the 2012 SWAP results higher percentages of garden waste and timber (17% and 16% respectively) were observed at the York Valley Landfill rather than at the RRC's (average 10% and 12% respectively). The higher timber percentages may be due to the fact that a number of the saw mills in the Tasman District bring their timber offcuts directly to the landfill as 'Special Waste' and therefore it will not have been captured through the RRC surveys. The Richmond RRC showed higher percentages of cardboard (10%), food waste (17%) and glass (12%) than either the Mariri RRC or the York Valley Landfill which had approximate 6 % cardboard, 12% food waste and 3% glass each.

A large amount of the glass observed were from glass manufactures with entire skip loads of sheet glass being disposed of as shown in Figure 6-4.

Figure 6-4: Sheet glass disposed of at Richmond RRC

At Richmond RRC ten skip loads were sampled during the survey period in which more than 90% of the load was sheet glass. This equated to approximately 56% of the total weight of glass recorded in the sampled vehicles.

Figure 6-5 shows the differences in waste composition data between Tasman District and Nelson City.

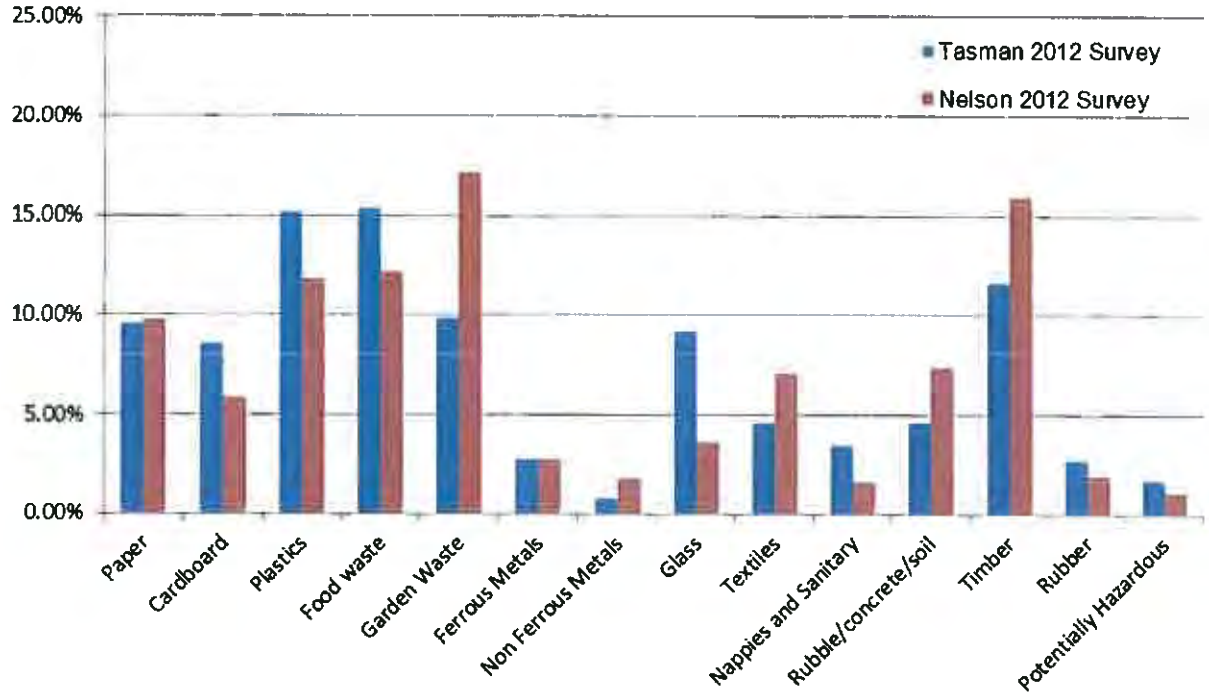

Figure 6-5: Comparison between Councils 2012

The 2012 SWAP results show a higher amount of construction material being disposed of in Nelson City than in Tasman District with 7% of rubble/concrete/soil and 16% of timber being observed in Nelson City compared to 5% of rubble/concrete/soil and 12% of timber being observed in Tasman District. Garden waste was higher in Nelson City at 17% compared to Tasman District at 10%, but the percentage of food waste (15%) in Tasman District was higher than that observed in Nelson (12%).

Tasman District shows higher percentages of recyclable such as cardboard (9%), plastics (15%) and glass (9%) compared with Nelson City Council with compositions of 6% cardboard, 12% plastics and 4% glass.

A higher percentage of textiles were observed in Nelson while a higher percentage of nappies were observed in Tasman District. Other minor components were comparable between the two Council areas.

Figure 6-6 shows the differences in waste composition data between Tasman District, Nelson City and the National Indicator sites.

The SWAP data for the National Indicator Sites was collected by the Ministry for the Environment (MfE) in 2007-2008 in order to establish baseline waste composition data for New Zealand and detect any trends over time. The National Indicator Sites include provincial and major urban sites.

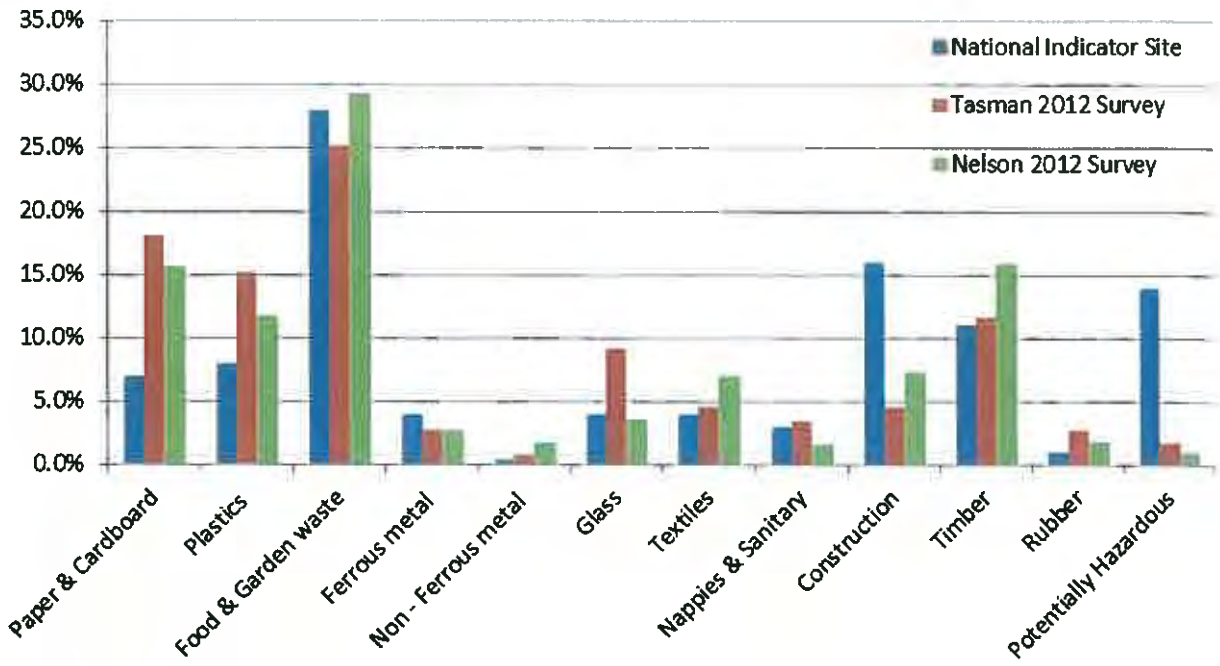

Figure 6-6: Nelson and Tasman Waste Composition Compared with MfE National Indicator Sites

The results show that a higher percentage of recyclable materials such as paper, cardboard and plastics in the Nelson-Tasman region than was recorded for the indicator sites. Putrescibles (food and garden waste) are comparable between the Nelson-Tasman region and the indicator sites at approximately 28%. Glass shows higher percentages in Tasman District however the Nelson City results are comparable with the indicator sites. Construction material is higher at the indicator sites (16%) than the Nelson Tasman Region (6%) although timber is higher for the Nelson Tasman Region (14%) than recorded at the indicator sites (11%). The percentage of potentially hazardous material is significantly higher at the indicator sites (14%) than recorded for the Nelson Tasman Region (1%). This may relate to differences in the types of materials being classified as potentially hazardous at each site.

7 Summary

This Nelson - Tasman SWAP Studies 2012 report provides a summary of the composition of waste being disposed of within the Nelson-Tasman region during the following two survey periods:

- 12 March and 4 April 2012, and
- 5 November and 28 November 2012.

These surveys were undertaken in accordance with procedure 2 of the MfE Solid Waste Analysis Protocol publication and the results provide a representative picture of the Nelson – Tasman Region.

The report also sets out the precision achieved by the surveys and compares the results between sites and surveys. This report will help to inform the remaining stages of the project and empower joint waste planning for increased and improved recycling and recovery actives in the Nelson Tasman region.

For future planning purposes however, it should be noted that an increase in the percentage of a particular waste component over time may not mean an overall increase in the total amount of that waste component and therefore further work would be required to be able to assess any changes in the overall quantities being disposed of in the Nelson Tasman Region over time.

Appendix A Intended Sampling Regimes

York Valley Sampling Plan

Number of staff	3.50
Number of days	6
Hours per day	7.5
Person Hours	158

		General Rubbish	Transfer Station	Skips and Mini Bins	Demolition	Street Litter	Buller District Council
	Calculations	bag trucks	compactor bins	skips and mini bins	skips and open tops	compactor trucks	truck and trailer
Number of Vehicles / week	A (assumed)	67	13	89	7	7	3
Mean Load Weight (kg)	B (assumed)	2343	7815	2211	2451	1616	19730
Time to sort (minutes)	C (assumed)	90	90	90	60	90	90
Total Weight (kg)	D = A x B	156,596	100,626	196,434	16,946	11,385	56,739
	E = D x sqrtC	1,485,597	954,621	1,863,536	131,260	108,010	538,276
Distribution of Effort	F = E/Total(E)	0.29	0.19	0.37	0.03	0.02	0.11
Person-hours	G = F x Person Hrs	46	30	58	4	3	17
Vehicles to Sample	H = G x 60/C	31	13	39	4	2	3
Sampling Interval	I = A/H	3	1	3	2	4	1
Average Vehicles/Day	J = H/6	6	3	7	1	1	1

Total number of vehicles intended to be sampled at York Valley = 91

Richmond RRC Sampling Plan

Number of staff	3.50
Number of days	6
Hours per day	8
Person Hours	168

	Calculations	bag trucks	compactors	loose rubbish	cars
Number of Vehicles / week	A (assumed)	12	32	59	36
Mean Load Weight (kg)	B (assumed)	1500	1326	1200	802
Time to sort (minutes)	C (assumed)	180	180	180	60
Total Weight (kg)	D = A x B	18,000	42,432	70,800	30,476
	E = D x sqrtC	241,495	569,285	949,882	236,066
Distribution of Effort	F = E/Total(E)	0.12	0.29	0.48	0.12
Person-hours	G = F x Person Hrs	20	48	80	20
Vehicles to Sample	H = G x 60/C	7	16	27	20
Sampling Interval	I = A/H	2	3	3	2
Average Vehicles/Day	J = H/7	1	3	4	3

Total number of vehicles intended to be sampled at Richmond RRC = 70

Mariri RRC Sampling Plan

Number of staff	3.50
Number of days	6
Hours per day	8
Person Hours	168

	Calculations	bag trucks	compactors	loose rubbish	cars
Number of Vehicles / week	A (assumed)	2	33	77	133
Mean Load Weight (kg)	B (assumed)	1425	2410	631	117
Time to sort (minutes)	C (assumed)	180	180	180	90
Total Weight (kg)	D = A x B	2,850	79,530	48,587	15,561
	E = D x sqrtC	38,237	1,067,007	651,863	147,625
Distribution of Effort	F = E/Total(E)	0.02	0.56	0.34	0.08
Person-hours	G = F x Person Hrs	3	94	57	13
Vehicles to Sample	H = G x 60/C	1	31	19	9
Sampling Interval	I = A/H	2	2	5	16
Average Vehicles/Day	J = H/7	1	5	3	2

Total number of vehicles intended to be sampled at Mariri RRC = 60

Appendix B Data Sheets

York Valley Landfill - Site Data Sheets

SWAP Survey November 2012

Date:	Nov-12	Total weight	
Time :		Tare weight -	
		Net weight :	
Vehicle Reg :			
York Valley Tag No:			

Vehicle Details

Company:	Buller DC	
	Can Plan	
	Duane Whiting	
	Envirowaste	
	Fitzgerald Construction	
	Fulton Hogan (Transfer station)	
	Graeme Marshall	
	Nelmac	
	Talleys	
	Waste Management	
	Other	
Source:	Municipal	
	Commercial and industrial	
	Building and demolition	
	Greenwaste	
	Other	
Description		
Vehicle type:	Compactor	
	Small Compactor	
	Mini Bin	
	Skip bin	
	Transfer Station	
	Truck & Trailer	
	Other	

Comments:

Category	Load #	Weight (record weight to 2dp, e.g. 4.65 kg)							Tare weight
1. News Paper	1		2		3		sub-total (kg)		
	4		5		6				
2. Office Paper	1		2		3		sub-total (kg)		
	4		5		6				
3. Other Paper	1		2		3		sub-total (kg)		
	4		5		6				
4. Cardboard (boxes, cartons)	1		2		3		sub-total (kg)		
	4		5		6				
5. Other Plastics (packaging)	1		2		3		sub-total (kg)		
	4		5		6				
6. Type 1 Plastics (drink bottles)	1		2		3		sub-total (kg)		
	4		5		6				
7. Type 2 Plastics (Milk bottles)	1		2		3		sub-total (kg)		
	4		5		6				
8. Food scraps / other organic (putrescibles, non-garden only	1		2		3		sub-total (kg)		
	4		5		6				
9. Steel Cans (magnetic cans)	1		2		3		sub-total (kg)		
	4		5		6				
10. Other Steel (Ferrous metals)	1		2		3		sub-total (kg)		
	4		5		6				
11. Aluminium/ copper etc (Non-ferrous metals)	1		2		3		sub-total (kg)		
	4		5		6				
12. Aluminium Cans	1		2		3		sub-total (kg)		
	4		5		6				
13. Glass (bottles, jars)	1		2		3		sub-total (kg)		
	4		5		6				
14. Textiles (clothing, carpet)	1		2		3		sub-total (kg)		
	4		5		6				
15. Nappies & sanitary	1		2		3		sub-total (kg)		
	4		5		6				
16. Rubble / concrete / soil (concrete, gib, sand etc)	1		2		3		sub-total (kg)		
	4		5		6				
17. Timber (framing, plywood, pallets)	1		2		3		sub-total (kg)		
	4		5		6				
18. Rubber (tyres)	1		2		3		sub-total (kg)		
	4		5		6				
19. Potentially hazardous	1		2		3		sub-total (kg)		
	4		5		6				
20. Garden Waste (grass, tree cuttings)	1		2		3		sub-total (kg)		
	4		5		6				

Comments: _____ TOTAL (kg) _____

Appendix C Waste Composition Data

Waste Composition Data

From the weights recorded during the first round of SWAP surveys, the following waste composition has been determined for each of the sites, Council areas and the combined region. This is presented in Table C-1 below.

Table C-1: Waste Composition analysed during Autumn Surveys

Category	Tasman District			Nelson City	Nelson - Tasman
	Mariri RRC	Richmond RRC	Mariri – Richmond Combined	York Valley Landfill	
Paper	12.3%	8.4%	9.6%	9.7%	9.7%
Cardboard	4.4%	9.2%	7.7%	5.8%	6.6%
Plastics	12.4%	15.1%	14.3%	10.5%	12.2%
Food waste	16.6%	22.3%	20.5%	12.2%	15.8%
Garden Waste	14.0%	10.7%	11.7%	20.6%	16.7%
Ferrous Metals	3.2%	1.5%	2.0%	2.8%	2.5%
Non Ferrous Metals	0.8%	1.0%	1.0%	1.3%	1.2%
Glass	4.1%	8.5%	7.2%	5.5%	6.2%
Textiles	5.8%	3.6%	4.3%	5.7%	5.1%
Nappies and Sanitary	3.8%	4.8%	4.5%	1.7%	2.9%
Rubble/concrete/soil	6.0%	4.7%	5.1%	8.6%	7.1%
Timber	8.6%	6.8%	7.4%	13.5%	10.8%
Rubber	7.3%	1.7%	3.4%	0.7%	1.9%
Potentially Hazardous	0.8%	1.7%	1.4%	1.2%	1.3%

From the weights recorded during the second round of SWAP surveys, the following waste compositions have been determined for each of the sites, Council areas and the combined region. This is presented in Table C-2 below.

Table C-2: Waste Composition analysed during Spring Surveys

Category	Tasman District			Nelson City	Nelson - Tasman
	Mariri RRC	Richmond RRC	Mariri – Richmond Combined	York Valley Landfill	
Paper	13.6%	7.8%	9.6%	9.8%	9.7%
Cardboard	7.8%	9.9%	9.2%	6.0%	7.6%
Plastics	17.1%	15.3%	15.8%	13.1%	14.4%
Food waste	9.8%	11.9%	11.3%	12.2%	11.8%
Garden Waste	11.4%	7.0%	8.3%	13.7%	11.1%
Ferrous Metals	5.7%	2.3%	3.4%	2.8%	3.1%
Non Ferrous Metals	0.6%	0.7%	0.6%	2.2%	1.4%
Glass	2.4%	14.5%	10.8%	1.7%	6.2%
Textiles	5.6%	4.5%	4.8%	8.4%	6.7%
Nappies and Sanitary	3.3%	2.5%	2.8%	1.6%	2.2%
Rubble/concrete/soil	7.8%	2.6%	4.2%	6.20%	5.2%
Timber	12.6%	16.1%	15.1%	18.3%	16.7%
Rubber	1.4%	2.6%	2.2%	3.1%	2.7%
Potentially Hazardous	1.0%	2.4%	2.0%	0.9%	1.5%

Table C-3 shows the combined waste composition for 2012 for each of the sites surveyed, Council areas and the combined region.

Table C-3: 2012 Waste Composition

Category	Tasman District			Nelson City	Nelson - Tasman
	Mariri RRC	Richmond RRC	Mariri – Richmond Combined	York Valley Landfill	
Paper	13.0%	8.0%	9.6%	9.8%	9.7%
Cardboard	6.3%	9.6%	8.6%	5.9%	7.1%
Plastics	15.0%	15.2%	15.1%	11.8%	13.4%
Food waste	12.8%	16.5%	15.4%	12.2%	13.7%
Garden Waste	12.6%	8.6%	9.8%	17.1%	13.8%
Ferrous Metals	4.6%	1.9%	2.8%	2.8%	2.9%
Non Ferrous Metals	0.7%	0.8%	0.8%	1.8%	1.3%
Glass	3.2%	11.9%	9.2%	3.6%	6.2%
Textiles	5.7%	4.1%	4.6%	7.1%	5.9%
Nappies and Sanitary	3.5%	3.5%	3.5%	1.7%	2.5%
Rubble/concrete/soil	7.0%	3.6%	4.6%	7.4%	6.1%
Timber	10.8%	12.0%	11.6%	15.9%	13.9%
Rubber	4.0%	2.2%	2.7%	1.9%	2.3%
Potentially Hazardous	0.9%	2.1%	1.7%	1.1%	1.4%

Figures C-1 to C-5 show each of the compositions in graphical form.

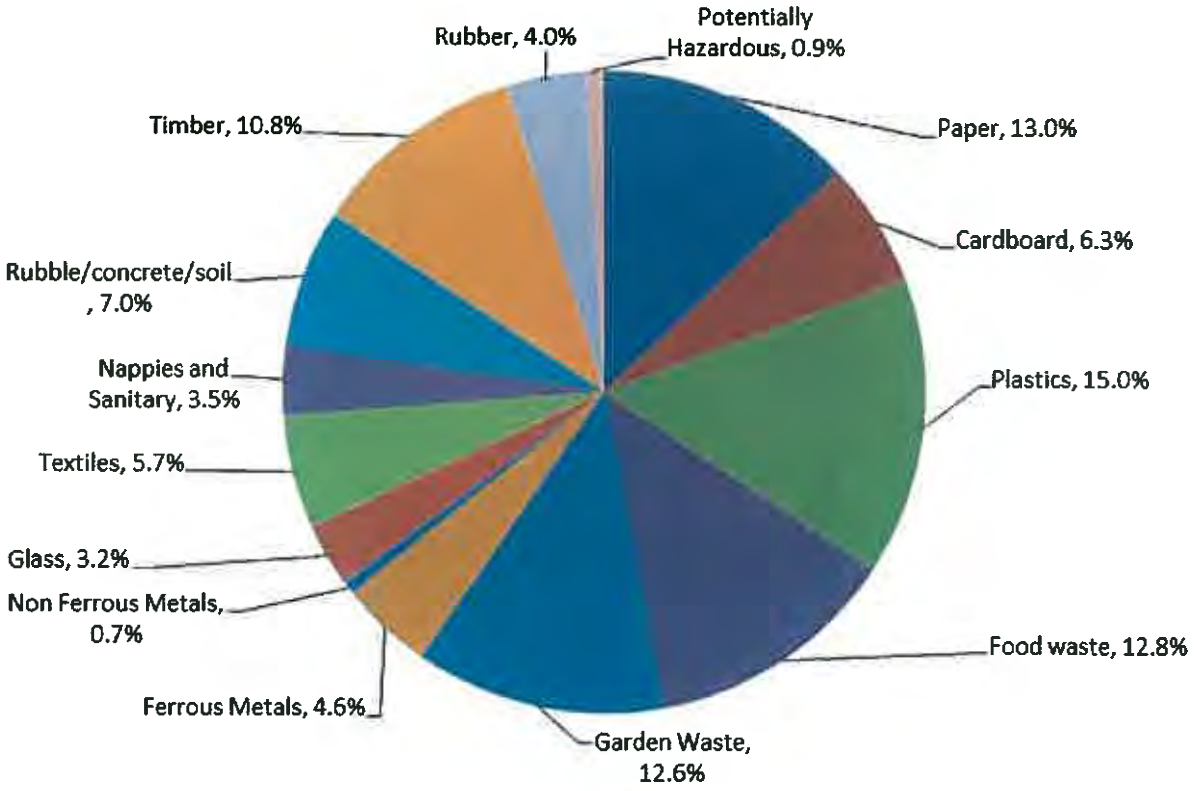

Figure C-1: Mariri RRC Waste Composition

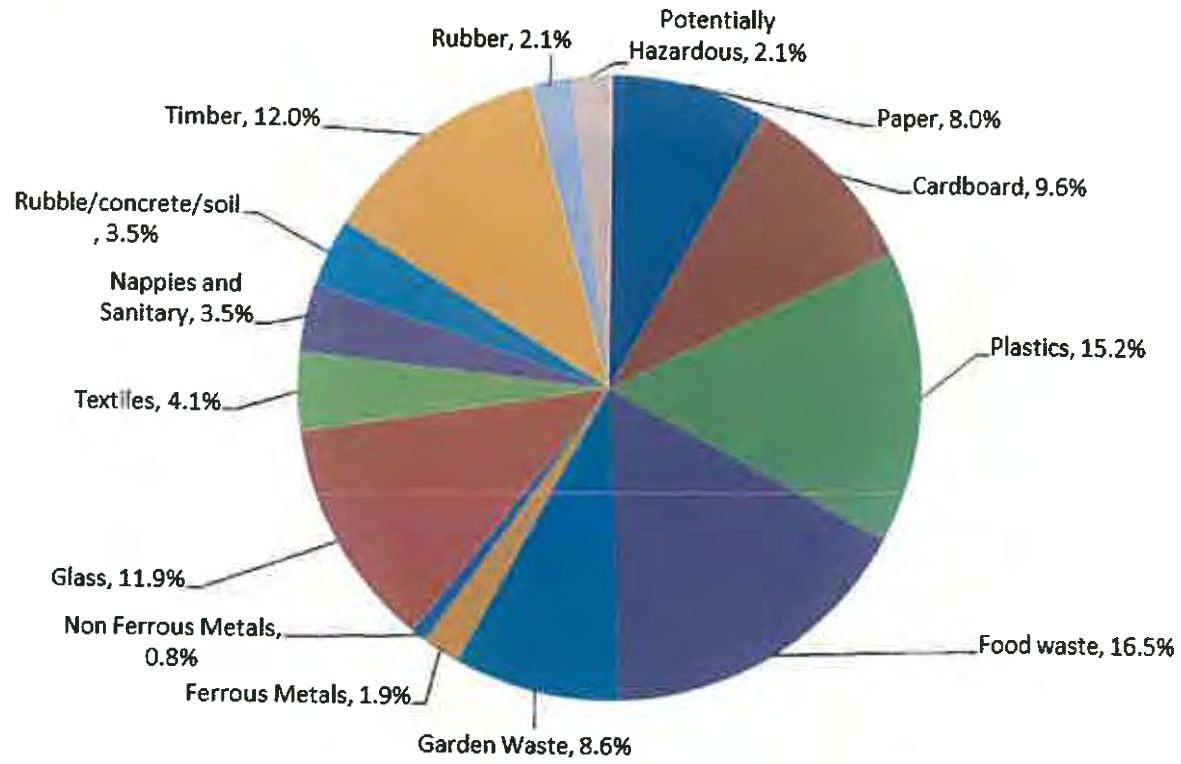

Figure C-2: Richmond RRC Waste Composition

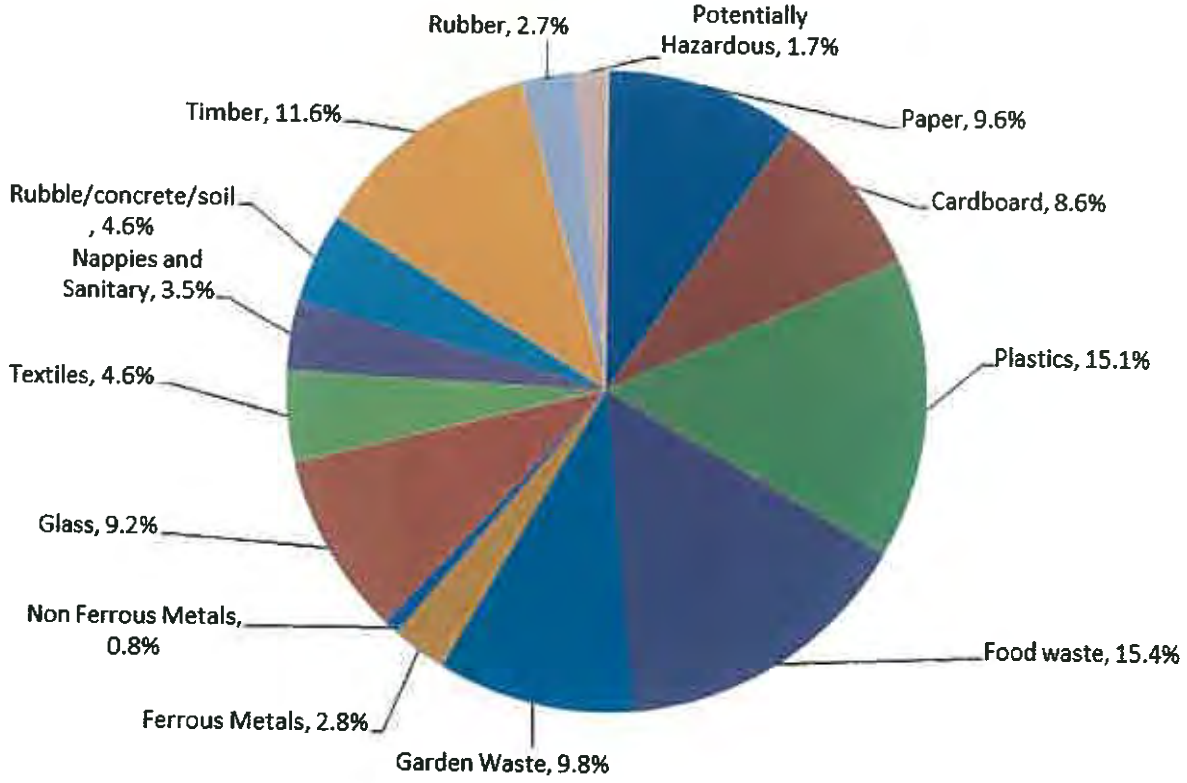

Figure C-3: Tasman District Waste Composition

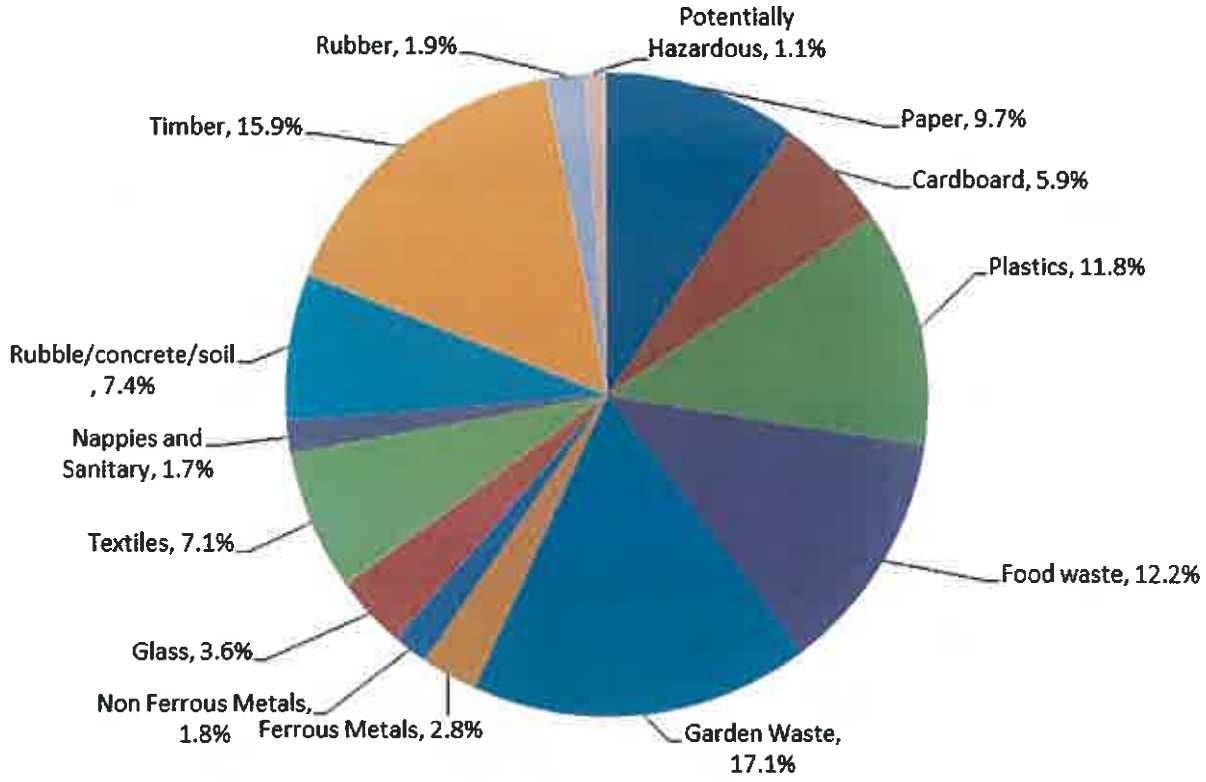

Figure C-4: Nelson City (York Valley Landfill) Waste Composition

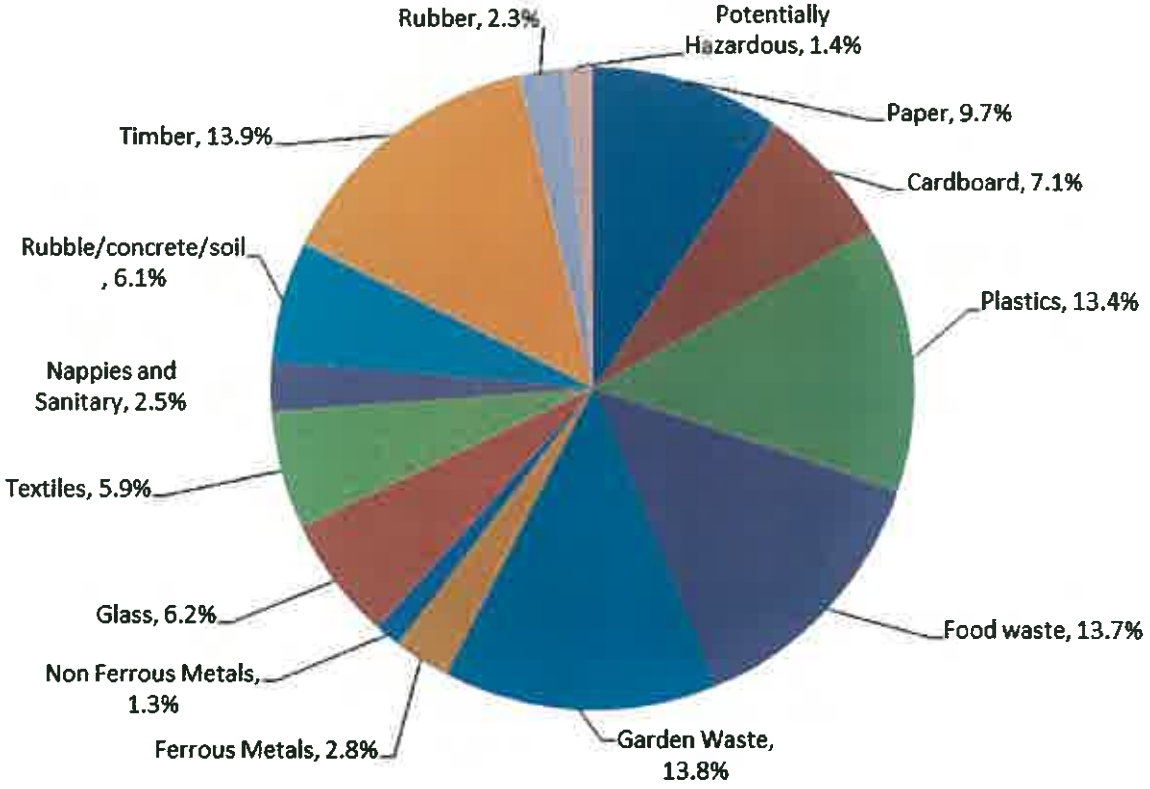

Figure C-5: Nelson - Tasman Waste Composition 2012

Waste Composition by Sub Category

As part of the 2012 survey the waste was categorised into a number of sub-categories, Table C-4 shows the combined waste composition (including sub-categories) for 2012 for each of the sites surveyed, Council areas and the combined region.

Table C-4: 2012 Waste Composition

Category	Sub Category	Tasman District			Nelson City	Nelson - Tasman
		Mariri RRC	Richmond RRC	Mariri – Richmond Combined	York Valley Landfill	
Paper	Newspaper	1.6%	1.4%	1.4%	1.4%	1.4%
	Office Paper	1.0%	1.1%	1.1%	3.0%	2.1%
	Other paper	10.4%	5.5%	7.0%	5.4%	6.1%
Cardboard		6.3%	9.6%	8.6%	5.9%	7.1%
Plastics	Type 1 Plastics	0.6%	0.5%	0.5%	0.4%	0.4%
	Type 2 Plastics	0.3%	0.4%	0.3%	0.3%	0.3%
	Other Plastic	14.2%	14.4%	14.3%	11.2%	12.6%
Food waste		12.8%	16.5%	15.4%	12.2%	13.7%
Garden Waste		12.6%	8.6%	9.8%	17.1%	13.8%
Ferrous Metals	Steel Cans	0.5%	0.5%	0.5%	0.4%	0.4%
	Other Ferrous	4.1%	1.5%	2.3%	2.4%	2.3%
Non Ferrous Metals	Aluminium cans	0.2%	0.2%	0.2%	0.2%	0.2%
	Other Non Ferrous	0.5%	0.7%	0.6%	1.6%	1.1%
Glass		3.2%	11.9%	9.2%	3.6%	6.2%
Textiles		5.7%	4.1%	4.6%	7.1%	5.9%
Nappies and Sanitary		3.5%	3.5%	3.5%	1.7%	2.5%
Rubble/concrete/soil		7.0%	3.5%	4.6%	7.4%	6.1%
Timber		10.8%	12.0%	11.6%	15.9%	13.9%
Rubber		4.0%	2.1%	2.7%	1.9%	2.3%
Potentially Hazardous		0.9%	2.1%	1.7%	1.1%	1.4%

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ATTACHMENT 2

Bell Island Sewage Treatment Plant

Anaerobic Digestion and Biogas Fuelled Electricity Generation

Options Up-date and Re-assessment

For Nelson Region Sewerage Business Unit

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4 April 2013

1488102

1. Summary of findings

This report covers a preliminary re-assessment of the options for anaerobic digestion (AD) at the Bell Island Waste Water Treatment Plant (WWTP) including biogas fuelled electricity generation.

The options were assessed in a feasibility study (WSFS) carried out by Waste Solutions Limited (WSL) for Nelson Regional Sewerage Business Unit (NRSBU) in 2007. The WSFS suggested that it would be economic to convert the WWTP to an anaerobic sludge digestion process. It also suggested that putrescent waste from the Nelson and Tasman Districts could be co-digested to increase the power output.

The conclusions from this re-assessment are that:

- Both project options have the potential to be economic despite some significant changes (since 2007) to their costs and benefits. These changes are summarised in section 4;
- Based on the updated costs, benefits and assumptions summarised in section 4, the economics of each option would be as follows;

Option	WWTP sludge	Co-digestion
Average electricity generation rate	340kW	590kW
Incremental capital cost	$4.4m	$6.0m
Simple payback	7.6 years	7.4 years
IRR real	11.0%	11.6%
NPV at NRSBU cost of capital	$1.6m	$2.4m

- The economics for both options are most sensitive to their incremental capital costs. This being the new plant cost less the avoided capital cost of extending the life of the existing ATAD system for a further 15 years. The economic analysis assumes this avoided capital is $3.0m but this is a placeholder only and needs to be better assessed;
- The economics are also sensitive to the estimated biogas yield and the value of the electricity generated. For the co-digestion option, the economics are also sensitive to the revenue that could be generated from avoided landfill gate fees;
- The technology risk is relatively low, but the co-digestion option has more risk associated with gas yield estimates and the collection costs of the putrescent wastes; and
- The co-digestion option also has the potential to significantly decrease the landfilling of putrescent waste in the region as part of a wider waste minimisation strategy.

Based on this re-assessment, these AD options warrant further investigation. In particular work to:

- Update the new plant capital cost estimate based on the smaller scale now required;
- Quantify the avoided capital cost associated with the ATAD plant life extension;
- Consult Network Tasman on potential electricity network benefits and costs; and
- Consider the synergies and benefits associated with the regional waste minimisation and renewable energy strategies.

2. Background and approach

The Feasibility study on AD with biogas fuelled power generation completed in 2007 (WSFS) concluded that both options considered would be economic and warranted further investigation. Since then there have been a number of significant changes to the situation, in particular:

- The amount of WWTP sludge (current and forecast) has reduced because major industries in the WWTP catchment (Alliance, ENZA and NPL) have now installed their own waste water pre-treatment;
- The forecast life of the existing ATAD system has been extended. WSL had suggested that the system would need substantial upgrade and expansion before 2015. This upgrade can now be deferred; and
- The costs of electricity and landfill gate fees have increased significantly.

This re-assessment has been carried out for NRSBU by P2P Energy Services (P2P) to update the conclusions of the WSFS and consider the economic sensitivities of the important assumptions.

P2P's re-assessment approach has been as follows:

- Inputs and assumptions used in the WSFS have been used except where these are clearly no longer valid as noted in section 4. Costs have been updated to $2013;
- The incremental capital cost estimates are based on new plant costs for the revised sludge volume, less a credit for the avoided capital expenditure on the ATAD over the next 15 years; and
- A standard discounted cash flow analysis has been used to assess the project economics and their sensitivity to the key input assumptions (incremental capital, gas yield, electricity price and gate fees revenue).

Reference documents are listed at the end of the report

3. Overview of options

The WSL proposal was to replace the existing Autothermal Thermophilic Aerobic Digesters (ATAD) at the Bell Island WWTP with anaerobic digestion (AD).

The AD process reduces the digestate dry mass by around 40% and produces biogas: typically with 60% methane and a GCV of 22 MJ/m3. The biogas can be flared, used in boilers to produce heat for the digesters or used for electricity and heat generation in a reciprocating gas engine generator. This technology is well proven.

For Bell Island, the main economic benefit from the proposed AD conversion with biogas fuelled power generation would be the reduction of electricity used by the ATAD plant and the additional generation of electricity for use on-site or export.

For NRSBU, the AD bioenergy opportunities are as follows:

Option	WWTP sludge only[1]	Putrescent from MSW	Combined Co-digestion[2]
Feed material – dry matter to AD	5.4 t/d	6.6 t/d	12 t/d
Biogas yield	670 m^3/t DM	410 m^3/t DM	530 m^3/t DM
biogas production rate	3,700 m^3/d	2,700 m^3/d	6,400 m^3/d
Average electricity generation rate	340 kW	250 kW	590 kW

Notes:
1. AD of sewage sludge only replacing the ATAD process; or
2. AD of sewage sludge, co-digested with imported putrescent material from food, agricultural and processing wastes.

A low risk strategy might be to undertake the first option (digestion of the sewage sludge only), and trial co-digestion in that facility before committing to the second stage.

It would be possible to establish a standalone AD digestion for the putrescent waste at one of the Landfill sites. This was not covered by the WSFS and is much less likely to be economic than the co-digestion option. This follows because co-digestion at Bell Island allows a larger scale and use of the existing infrastructure.

4. Key input assumptions and variability

The re-assessment indicates that the economics of the options are most sensitive to the incremental capital cost, the gas produced per tonne of dry matter, the value of the electricity and the potential for gate fee revenues. This section reviews these inputs and documents general assumptions.

Incremental capital expenditure

The reassessment is based on the original WSFS capital cost estimates for the AD options which appear reasonable. These have been scaled down to match the smaller sludge loadings and generation capacity, and then escalated to $2013 at CPI.

These base costs have been adjusted as follows to account for other potential capital cost credits:

Option	WWTP sludge only	Co-digestion
Base capex for new plant including electricity generation – scaled and updated to $2013	$7.4m	$10.0m
Credit for avoided ATAD asset renewal over 15 years. This is a placeholder being the NPC of 15 years of asset renewal and upgrade expenditure on the ATAD plant. The 2012-2013 NRSBU Business Plan identifies $3.6m of asset renewal on sludge treatment over the next 11 years and a $5m ATAD upgrade in 2016.	-$3.0m	-$3.0m
Waste Levy grant to support waste minimization. This is a-placeholder assuming that NRSBU could secure a grant for the co-digestion option	-	-$1.0m
Total incremental capex estimate	**$4.4m**	**$6.0m**

Note that the above estimates use a placeholder for the assumed ATAD asset renewal credit. This credit is critical to the economics and will need to be properly assessed if one or other of these the option is progressed.

For the sensitivity analysis, a potential capex variability of ±30% has been used.

Sewage sludge volumes

The WSFS assumed there was around 12.5t COD/day in the sludge from the WWTP (in 2007) and this would increase to 20t COD/day sludge. This meant that additional ATAD capacity would need to be built around 2015.

However currently the average sludge production has not increased and is within the existing ATAD capacity. The reassessment assumes the sludge volumes and COD will remain at the current level.

The WSFS assumes AD will produce around 670m^3 biogas/t dry matter. This assumption appears reasonable and is presumably based on WSL knowledge of AD at other NZ WWTPs plants. For the sensitivity analysis, a potential biogas yield variability of ±20% has been used.

Imported solid waste suitable for digestion

The WSFS assumed that 8,000t/y (wet basis - 2007) of digestible wastes could be collected. It also appears to assume the material would be 30% dry matter and produce around 1,000m^3 biogas/t dry matter.

The recent SWAP Study found that there was approximately 8,000t/y food waste landfilled at either the York Valley or Eaves Valley landfills. This does not include a similar quantity of agricultural and processing wastes that are disposed of elsewhere. The amount of this putrescent material that could be economically diverted to digestion is uncertain and will be influenced by regional waste minimisation strategies, the level of waste separation at source and the gate fee charged for its disposal.

This gas yield rate inferred from the WSFS is well above that suggested in other literature sources and this re-assessment assumes a rate of 410m^3 biogas/t dry matter. The biogas generation potential of the different components of this waste stream vary significantly. Consequently the biogas yield for the putrescent waste is less certain than for sewage sludge.

Noting the above, this re-assessment is based on 8,000t/y putrescent waste at 30% dry matter producing 410m^3 biogas/t dry matter. For the sensitivity analysis, a biogas supply variability of ±30% has been used.

Value of electricity

The WSFS assumed the value of electricity produced (or no longer consumed) from an on-site biogas fuelled power plant would average 6c/kWh. The value of electricity is now substantially higher.

In addition embedded generation can also generate electricity market revenue from avoided network and transmission charges and, in some cases from other embedded generations benefits for the Network Company.

NRSBU are currently paying the following avoidable costs for its main bulk electricity supply:

- Energy charge averaging 9.2c /kWh. This has reduced from 10.9c/kWh in 2011 and is likely to return to this higher rate after the current contract expires. After that time, the unit cost can expected to increase in real terms (above the inflation rate) – a reasonable assumption being a 1% annual increase;
- Variable network charges averaging 1.8c/kWh. These relate to the variable costs of electricity distribution and may change if embedded generation was installed; and
- Variable transmission charges (RCPD) of 30.77 c/kW_{RCPD}/day. This means that a KW of demand averaged over the upper South Island transmission peak periods costs NRSBU $112/kW/y. This charge rate is likely to rise over the next few years to recover the cost of the recent large grid upgrades.

The above network charges are based on pricing effective from 1 April 2013.

Consequently the current market value of on-site generation (or demand reduction) is currently approximately as follows:

	Variable unit cost c/kWh	**Capacity cost $/KW peak/y**
Imported electricity or site load reduction	12.7	112
Exported power to Network Tasman	10.9	112

There is also a fixed capacity charge (currently base on approximately 650KVA at 15.62/kVA/day) related to fixed network costs. This might also reduce if the WWTP did not need this level of supply capacity after the conversion.

Note that Network Tasman can change the tariff structure at any time (acting reasonably) and their treatment of the proposed embedded generation will be important to its economics.

For the sensitivity analysis, an electricity price variability of ±10% has been used.

Gate Fees

The WSFS did not account for any avoided Landfill gate fee revenue, assuming that the avoided gate fees of around $56/t would be fully offset by additional separation and collection costs.

Gate fees for general waste at York Valley Landfill is currently $93/t (excluding GST) and slightly higher at Eaves Valley. This includes the $10/t waste levy.

For the re-assessment it is assumed that 20% of the avoided gate fee is secured as revenue for the co-digestion project, with the sensitivity analysis considering the range of percentages between zero and 40% of the avoided gate fee.

Operating and maintenance costs

The following operating and maintenance cost changes are assumed:

- The WWTP electricity consumption will be reduced by 230 kWh/h without ATAD;
- The new AD process and generation plant will use 10% of the extra electricity generated;

- Generation plant O&M costs will average 1.4c/kWh;
- Preparation and maceration of the imported putrescent will cost $5/t;
- Disposal costs for the digested sludge will not change; and
- The co-digestion option will require one extra FTE.

Economic assumptions

The economic assumptions used for the WSFS are not clearly stated. Assumptions used in this update are as follows:

- Generation plant operating availability: 90%;
- Economic life: 15 years;
- NRSBU annual cost of capital: 6% real;
- Annual inflation: 2.5%;
- Company tax: not applicable – this is a non-taxable activity for NCC and TDC; and
- Depreciation: not applicable to the DCF analysis for a non-taxable activity.

5. Updated comparison

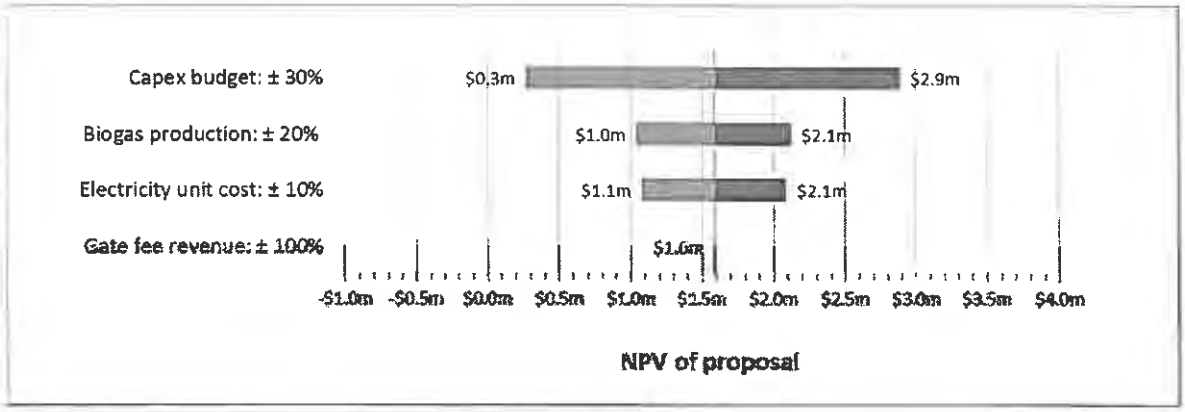
The breakdown of the original economic analysis undertaken by WSL was not included in the WSFS. A standard discounted cash flow analysis, using the assumptions given in section 4, has been used for the re-assessment.

The two project options have been assessed against the business as usual situation. For the base case assumption the comparison is as follows:

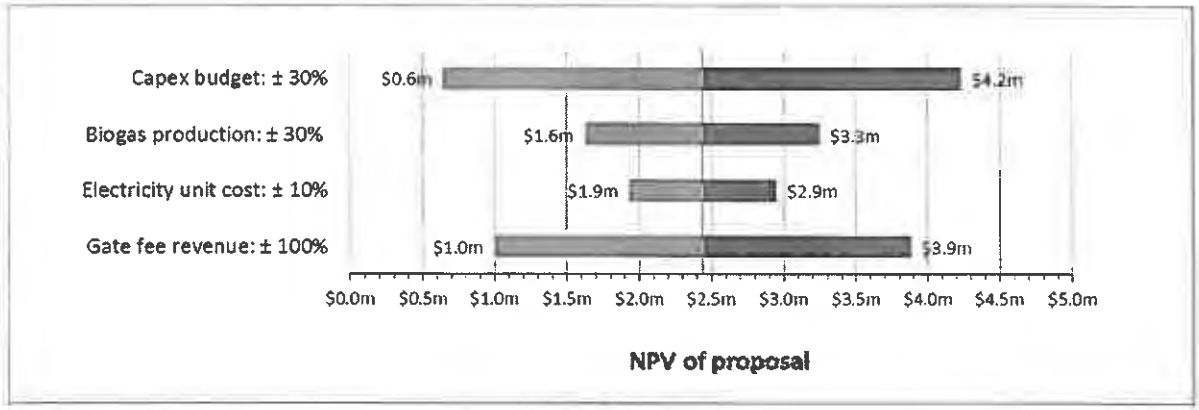
Option	WWTP sludge only	Combined Co-digestion
Capex	$4.4m	$6.0m
Revenues (2014)	$610,000/y	$980,000/y
Increased O&M costs (2014)	$38,000/y	$166,000/y
Annual net cash flow change (2014)	$572,000/y	$814,000/y
Simple payback	7.6 years	7.4 years
IRR real – for a non-taxable activity	11.0%	11.6%
NPV at NRSBU cost of capital	$1.6m	$2.4m

Note that if the project was developed under a Build, Own Operate and Transfer (BOOT) arrangement with ownership by a third party, the activity would be taxable for the owner and the IRR and NPV would be lower.

The effects of the key variables on the NPV of the WWTP sludge option are as follows:



The effects of the key variables on the NPV of the co-digestion option are as follows:



6. Other risks and their management

Apart from the key sensitivities illustrated above, other potential risks associated with this option include:

Risk	Nature/effect	Mitigation/management
Technical risk	Failure of the technology and/or availability of suitable putrescent waste	Outsource ownership using BOOT or DBO approach. Stage development with trial of co-digestion before committing to the next stage
Putrescent waste contamination	Experience elsewhere indicates the level of contamination from tramp material, chemicals and plastics needs to be kept to an absolute minimum	Good planning and plant design Active management of the waste separation process
Changes to Network Tasman (NTL) charges	NTL and/or Transpower can change their tariff structure at any time (acting reasonably) and their treatment of the proposed embedded generation will affect its economics	Pre-agreement with NTL on treatment of embedded generation

Risk	Nature/effect	Mitigation/management
Nitrogen and Phosphorous loading on land	For the co-digestion option – the imported putrescent waste would increase the N and P loading in the biosolids	Requires investigation NRSBU is planning to install N and P removal around 2018
Biosolids not disinfected	The traditional mesophilic AD does not disinfect biosolids	AD plant costed to include a Thermophilic stage for disinfection. Waste heat for this is available from engine generator
Generator breakdown	Typical availability is 95%. When out of service biogas will need to be flared or used in a standby unit	90% availability assumed

7. Next steps

P2P's re-assessment indicates that both of the AD bioenergy options considered have the potential to be economic for NRSBU and warrant further consideration.

The first option (sewage sludge only) is preferred because it requires less capital and has lower technical risk. If the first option proceeded, co-digestion could be added later as a second stage development.

If NRSBU wish to improve the confidence level of the assessment, the next steps should be as follows:

- Update the new plant capital cost estimate based on the smaller scale now required;
- Quantify the avoided capital cost associated with the ATAD plant life extension;
- Consult Network Tasman on the potential electricity network benefits and costs; and
- Consider the synergies and benefits associated with the regional waste minimisation and renewable energy strategies.

To progress the co-digestion option, NRSBU could:

- Identify industries disposing of bulk putrescent wastes by alternative means (to landfilling) and quantify the volumes and seasonality of these wastes; and
- Investigate potential for a Waste Levy grant for the co-digestion option.

It is possible that EECA may be prepared to co-fund some of this further work.

8. Basis of information and limitations

This review has been undertaken by P2P Energy Services (P2P) solely for NRSBU, to provide an indicative update of the options for anaerobic digestion for biogas power generation. The review is based on information provided by NRSBU. P2P has not independently verified this information. Should NRSBU intend to use the review for any other purpose, NRSBU should satisfy itself as to the accuracy of this information.

Key information sources used by P2P to prepare the profile include:

- Report on Preliminary Assessment AD for the Bell Island WWTP, Waste Solutions Limited (WSL), September 2007
- Bell Island WWTP Energy Audit, Enercon, June 2012
- NRSBU Asset Management Plan, 2007
- NRSBU Business Plan, 2012-2013
- Bioenergy Options Report, Scion/WSL, October 2007
- Nelson-Tasman SAWP Study, MHW, February 2013
- Network Tasman Tariff, from 1 April 2013

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REPORT 1521529

Solid Waste TV TakeBack

1. Purpose of Report

1.1 To consider the ongoing disposal of televisions in Nelson following the conclusion of the television recycling programme initiated by the Ministry for the Environment.

2. Recommendation

***THAT** the report Solid Waste TV TakeBack (1521529) be received;*

***AND THAT** Council continue to subsidise the recycling of televisions once the Ministry for the Environment subsidy cap of 2,102 is reached so that Nelson residents are not required to pay more than $10 per television for the recycling of unwanted televisions;*

***AND THAT** TV TakeBack be continued once the Ministry for the Environment scheme has come to an end, noting that Tasman District Council will also be continuing TV TakeBack;*

***AND THAT** the amount of $20,248 budgeted for Zero Waste Grants in the 2013/14 Annual Plan be reserved as a contingency for the continuation of TV TakeBack;*

***AND THAT** a further report be prepared for Council once more reliable information is available so that Council can consider the continued funding of the programme.*

3. Background

3.1 Joint Waste Management and Minimisation Plan (JWMMP) adopted by Nelson City and Tasman District Councils direct that a co-ordinated approach to waste management and minimisation activities in the Nelson/Tasman area is likely to achieve the best outcomes for the region.

3.2 Consistency in approach between the two Councils is considered important but the plan does allow the two Councils to adopt different approaches when dealing with waste issues.

3.3 Following consideration of a report (Attachment 1) regarding the television recycling programme (TV TakeBack) developed by the Ministry for the Environment (MfE) to deal with the disposal of unwanted televisions following the switch to digital transmission on 18 April 2013 the Joint Waste Working Party made the following resolutions:

> *THAT the report (1472365), Solid Waste TV TakeBack be received;*
>
> *AND THAT the Joint Waste Working Party recommends to Nelson City and Tasman District Councils that they only accept TVs on a cost recovery basis once the TV TakeBack funding has been expended;*
>
> *AND THAT the Councils adopt a cost recovery approach for all Cathode Ray Tubes while a longer term e-cycling solution is developed;*
>
> *AND THAT both Councils consider writing to the Ministry for the Environment with a copy to local MPs and LGNZ expressing their concern that it is very likely that the TV Takeback funding programme will be insufficient to meet local demand and urge further funding to be made available. Also urge the Government to institute a Product Stewardship programme for TVs and other e-waste.*

3.4 MfE views TV TakeBack as a start of a move towards a long term solution for e-waste through the development of e-waste recycling capacity. Infrastructure created will be part of any future mandatory requirements under the Waste Minimisation Act.

4. Discussion

The Joint Waste Working Party

4.1 The working party accepted the principle that televisions that contain Cathode Ray Tubes (CRT) are classified as hazardous waste considering the leachability of lead from CRTs.

4.2 The working party accepted that unwanted CRT televisions should be diverted from sanitary landfills and preferably recycled to manage the pollutants associated with CRTs.

4.3 The working party favoured the principle of full cost recovery for the treatment of unwanted televisions once the subsidy cap set by MfE is reached.

TV TakeBack in Nelson

4.4 The MfE has partnered with three recycling organisations nationally that are responsible for the implementation of the TV TakeBack programme and provides a subsidy per television at a level that means the cost to the public to recycle a television through TV TakeBack will be capped at $5. These companies have contracted with national retail chains, local recyclers and territorial authorities to receive and process televisions for recycling.

4.5 Nelson City Council has chosen to work with RCN e-Cycle (RCN), one of the three TV TakeBack recycling partners approved by MfE, on TV TakeBack. Nelmac, the Nelson City Council recycling contractor, has entered into an agreement with RCN to act as one of their partners to receive televisions from Nelson residents and dispatch them to RCN for recycling. A number of local participating retailers also receive and process unwanted televisions.

4.6 The MfE has capped the number of subsidies available to territorial authorities, based on the availability of funding from the Waste Minimisation Fund, once the cap of 2,102 set for Nelson is reached the programme will be stopped. A separate cap is in place for national retailers who take part in the programme. Over 1,600 of the original MfE subsidies continue to be available at the time of writing this report.

4.7 Based on statistics available from the TV TakeBack initiative completed in Hawkes Bay and on-line surveys carried out in urban areas an average of three out of five household have an unwanted television indicating that there could be as many as 12,000 unwanted televisions in Nelson.

4.8 Nelson City and Tasman District Council staff, the recycling service providers for Nelson and Tasman, and RCN staff collaborated to communicate the initiative to the public with the primary focus on waste avoidance and the safe disposal of televisions.

4.9 During the first five weeks of recycling an average of 90 televisions were received per week by Nelmac and 1,443 televisions by retailers in the Nelson area. Nelmac has reported that the number of televisions dropped off has decreased so significantly (31 per week in the fifth week of the programme) that it is no longer viable to provide this service and that they are reviewing their agreement with RCN.

4.10 Some retailers in Nelson have already stopped participating in the scheme and there is uncertainty when others will withdraw from the programme. It was always anticipated that retailers will stop receiving unwanted televisions once they have reached their quotas. While the MfE keeps their three recycling partners informed regarding the number of televisions received for recycling there is little certainty when the respective caps will be reached.

4.11 It is anticipated that the number of televisions dropped off for recycling at Nelmac will increase once retailers taking part in the programme

withdraw from the programme. Nelmac has reported that the cost of providing the service is $200 per day. In order to continue with the programme it was agreed to pay Nelmac $200 per day minus $4 per television received to continue providing the service to the Nelson public. Legacy of the TV TakeBack Initiative

4.12 Toxicity Characteristic Leaching Procedure (TCLP) tests carried out on CRTs show that the leachability of the lead in colour CRTs is more than three times the United States regulatory limit and CRTs are therefore classified as hazardous waste.

4.13 The increased number of televisions that are likely to be disposed of by residents following the switch to digital transmission makes it essential that Council consider and adopt a suitable disposal strategy once TV TakeBack stops.

4.14 The disposal of CRTs to landfills can be managed. The mobility of heavy metals can be prevented by separating CRTs from agents that will cause the leaching of heavy metals from the CRTs. The hazardous nature of components in CRT televisions and computer monitors is considered such that the increased number of televisions cannot be safely disposed of at York Valley without developing specific disposal processes.

4.15 This will require that all monitors sent for disposal be separated from the general waste stream and processed through the Pascoe Street transfer station as hazardous waste.

4.16 While the progress made by Government towards developing a permanent solution for e-waste is disappointing it is considered important that the momentum created by the TV TakeBack initiative is not lost.

5. Financial Implications

5.1 The cost of disposing of an average sized television in Nelson is estimated from less than a dollar when disposed of at landfill as a part load by waste contractors to fifty dollars when fully recycled outside the TV TakeBack programme. Residential customers can currently dispose of televisions at the Pascoe Street transfer station at a cost of $18 per television disposed of individually or as a part load of waste up to 0.5m^3.

5.2 Considering the hazardous nature of televisions they can in future be accepted as hazardous waste at the Pascoe Street transfer station at a cost of $2 per kilogram with the first two kilograms free of charge. The average charge for the disposal of a television at Pascoe Street is estimated at over $35. A medium sized CRT weighs 13.5kg.

5.3 Due to the specific nature of CRT televisions and monitors it is feasible to develop a specific disposal methodology for this waste. The cost of handling a television as hazardous waste is unlikely to cost less than $25 per television. With the estimated cost of responsible recycling of televisions slightly less than this cost, recycling of televisions are

considered the preferred disposal method of unwanted televisions in Nelson. A 2007 report published in "The Environmental Engineer", a publication of the Institution of Engineers in Australia, concluded that while there is no economic incentive to recycle televisions that the recycling of CRTs clearly produces overall environmental benefits.

5.4 Council did not budget for this expenditure as it was considered that the MfE would fund the TV TakeBack programme until a stewardship programme was in place. The Joint Waste Working Party recommended that the Councils implement a user pays strategy for the recycling of televisions once the MfE initiative is stopped. However, if Council decides to extend the TV TakeBack programme by subsidising the cost of recycling televisions so that the cost of disposal to the public is retained at the $5 per television set under the TV TakeBack programme the cost for the next 15 months is estimated up to $240,000.

5.5 Recent surveys showed that while many people are willing to pay $10 to $25 for the recycling of televisions that around 34% of respondents indicated that this service should be provided free of charge. A survey carried out in July 2012 in Nelson indicated that respondents would generally be willing to pay $10 for the recycling of televisions. Considering that kerbside recycling in Nelson is provided at no cost to the public continuing to subsidise the recycling of televisions once the MfE TV TakeBack initiative is stopped can be considered consistent with current Council policy and will ensure that a large number of CRT's will be diverted away from the York Valley landfill.

5.6 It is difficult to monitor the effectiveness of the waste awareness programme rolled out with the TV TakeBack initiative in Nelson but the low numbers of unwanted televisions received at the participating recycling operations suggest that the message is likely to have had some impact on the behaviour of residents.

5.7 Introducing a User Pays Strategy once the MfE initiated project, where the public became used to a cost of $5 per television, comes to an end could create a challenging environment. Adopting a cost of $10 per television payable by the public will reinforce the user pays message at a cost where the majority of the public in Nelson has indicated they will be willing participants.

6. Funding of the Continuation of TV TakeBack

6.1 The estimated cost of continuing the TV TakeBack programme once the MfE cap is reached and accepting a cost to the public of $10 per television is unlikely to exceed $120,000. However, it could be considerably less than this amount considering the local waste awareness programme.

6.2 To fund an additional subsidy of $120,000 per annum will require an increase of around $4 per tonne of waste disposed of at the landfill. The amount was not allowed for in the 2013/14 Annual Plan.

6.3 There is a "discretionary" amount of $20,480 budgeted for Zero Waste Grants in the 2013/14 Annual Plan and it is proposed that this amount be earmarked for subsidising the TV TakeBack programme once the MfE cap is reached. Cash flow and budgets can be closely monitored and reviewed once more reliable information is available.

6.4 Tasman District Council officers have indicated that they have funding available that they will advise their Council to use for this purpose if Nelson City Council decides to continue with TV TakeBack.

7. Conclusion

7.1 Continuing the TV TakeBack programme once the MfE cap is reached is consistent with the current Council Recycling Policy.

7.2 Research has shown that many Nelson residents will consider paying $10 for the recycling of their unwanted televisions.

7.3 No allowance was made on the 2013/14 Annual Plan for subsidising the recycling of televisions.

7.4 Reserving the $20,248 budgeted for Zero Waste grants as a contingency to continue with the TV TakeBack initiative will provide some security and flexibility that budgets will not be exceeded.

7.5 Tasman District Council waste minimisation staff has indicated that they have funds available on their budgets that can be used to continue TV TakeBack conditional to Council approval.

Johan Thiart

Engineering Adviser

Attachments

Nil

Supporting information follows.

Supporting Information

1. Fit with Community Outcomes and Council Priorities

Affordable services.

2. Fit with Strategic Documents

Providing affordable services, protect the environment and promote sustainable solutions.

3. Sustainability

The implementation will reduce waste, effective resource use, mitigate pollution.

4. Consistency with other Council policies

The proposal is consistent with the Council's Sustainability Policy.

5. Long Term Plan/Annual Plan reference and financial impact

Implementation of project likely to require change to LTP and Annual Plan.

6. Decision-making significance

This is not a significant decision in terms of the Council's Significance Policy.

7. Consultation

It is considered that appropriate consultation has been undertaken with the issue clearly identified in the Joint Waste Management and Minimisation Plan.

8. Inclusion of Māori in the decision making process

Iwi is represented on the Joint Waste Working Party and have been consulted during the development of the Joint Waste Management and Minimisation Plan.

9. Delegation register reference

Decision by Council.

REPORT 1528204

Joint Waste Working Party: Annual Review

1. Purpose of Report

1.1 To report back to the Council of the activities of the Joint Waste Working Party.

2. Recommendation

THAT the report Joint Waste Working Party: Annual Review (1528204) be received.

3. Background

3.1 Nelson City and Tasman District Councils adopted the Joint Waste Management and Minimisation Plan (JWMMP) in April 2012. The Council recommended the following:

> *THAT the Joint Waste Working Party meets annually to consider a report and report progress on the implementation of the Joint Waste Management and Minimisation Plan to Nelson City and Tasman District Councils.*

4. Discussion

4.1 The draft minutes of the of Joint Waste Working Party meeting held on 18 April 2013 are in Attachment 1.

4.2 The report recording the progress towards the implementation of the Joint Waste Management and Minimisation Plan considered by the Joint Waste Working Party is in Attachment 2, 3 and 4.

4.3 The Joint Waste Working Party considered a report on the terms of reference for the Joint Waste Working Party at their meeting on 18 April 2013 and a separate report will be prepared for the consideration by Council on 18 July 2013.

Johan Thiart
Engineering Adviser

Attachments

Attachment 1: Unconfirmed Minutes of Joint Waste Working Party meeting 18 April 2013 1528205

Attachment 2: Solid Waste: Annual Review of Joint Waste Management and Minimisation Plan 1481324

Attachment 3: Joint Waste Management and Minimisation Plan Status Update 1489042

Attachment 4: Annual Indicators 1491123

No supporting information follows.

ATTACHMENT 1

Nelson City Council
te kaunihera o whakatū

tasman lifestyle district council

Minutes of the Nelson City Council and Tasman District Council Joint Waste Working Party

Held in Heaphy Room, Tasman District Council, 189 Queen Street, Richmond

On Thursday 18 April 2013, commencing at 2.00pm

Present: Tasman District Council: Councillors J Edgar (Chairperson), B Dowler and S Bryant
Nelson City Council: Councillors D Shaw, M Ward and R Copeland
Independent Members: Dr E Kiddle, Mr G Cameron (Nelson Marlborough District Health Board), Mr M Hippolite, Ms K Stafford

In Attendance: Tasman District Council: Utility Assets Engineer (D Stephenson), Utility Assets Manager (J Cuthbertson), Executive Assistant (R Scherer)
Nelson City Council: Engineering Adviser (J Thiart), Executive Manager Strategy and Planning (M Schruer)

Consultant: MWH (J Cocks, in part)

Apologies: Apologies were received and accepted from E Kiddle for lateness

Cr Bryant/Cr Ward CARRIED

The Chairperson, Councillor Edgar, welcomed everybody to the meeting

1.0 Election of Chair

Cr Judene Edgar was elected unopposed

Cr Bryant/Cr Ward CARRIED

1.1 Election of Deputy Chair

Mike Ward was elected unopposed

Cr Edgar/Shaw CARRIED

2.0 Conflicts of Interest

Nil

3.0 Terms of Reference **1-4**

Document number 1488654.

D Stephenson presented the report to the working party.

In response to Cr Ward it was agreed that staff would prepare a draft work plan looking at activities for the next 12 months and then 24 months.

Resolved:

THAT the report (1488654), Joint Waste Working Party: Terms of reference, be received;

AND THAT Nelson City and Tasman District Councils be advised that the Joint Waste Working Party adopted the following terms of reference;

AND THAT the Councils adopt the Terms of Reference.

Cr Dowler/Cr Shaw CARRIED

4.0 Annual Review of Joint Waste Management and Minimisation Plan 5-21

Document number 1481324

D Stephenson presented the report to the working party and tabled an amended Attachment 2 of the report.

After discussion the working party agreed that better information and statistics on what tonnages were being sent to cleanfill was required, and that staff should endeavour to collect this information.

Ed Kiddle suggested that the information and the graphs presented in the report could be used in publicity campaigns as a way of influencing behaviours around waste disposal.

There was some discussion on the need for bottle recycling. It was noted that this at present it is not a priority but will be considered in the next review of the work programme for community engagement.

Resolved:

THAT the report (1481324), Annual Review Joint Waste Management and Minimisation, be received.

Cr Ward/Cr Copeland CARRIED

5.0 Solid Waste Regional Landfill Disposal Study 22-51

Document number 1472866

D Stephenson presented the report to the working party. John Cocks of MWH was in attendance for this report.

The Chairperson commended MWH on the quality of their report.

There was some discussion on the duration of landfill designations and whether they lapse after a period of time. Council staff undertook to check the detail.

There was some concern expressed about the tight timeframes referred to the recommendation. Staff undertook to prepare an implementation schedule with timeframes.

Cr Ward stressed the need for any recommendations to be outcome focused. He noted the focus should be on waste minimisation and include Life Cycle principles and Product Stewardship aspects.

Resolved:

THAT the report (1472866), Regional Landfill Disposal Study be received;

AND THAT Nelson City and Tasman District Councils be advised that the Joint Waste Working Party consider a joint landfill strategy (whereby general waste is disposed of at York Valley and special waste at Eves Valley) will provide the most economical regional landfill option for Nelson-Tasman

AND THAT the Joint Waste Working Party consider that a joint landfill solution will provide enhanced opportunities to minimise waste across the region;

AND THAT Nelson City and Tasman District Councils endeavour to agree on a joint landfill strategy for the region and interim commercial arrangements by September 2013;

AND THAT Nelson City and Tasman District Councils progress with the investigation of governance options for managing joint waste management facilities from October 2013;

AND THAT Nelson City and Tasman District Councils retain the designation and consenting of both landfills;

AND THAT the mitigation of risks to the landfills posed by natural disasters by the continued operation of both landfills is acknowledged.

Cr Bryant/Ward CARRIED

6.0 Solid Waste TV TakeBack 52-58

Document number 1472365

J Thiart presented the report to the working party.

There was discussion among the working party regarding the limited nature of the funding for the TV takeback programme, and the message that low cost

disposal sends to the community. The working party discussed implementation of a programme based on cost recovery principles and for central government to progress a product stewardship programme.

Resolved:

THAT the report (1472365), Solid Waste TV TakeBack be received;

AND THAT the Joint Waste Working Party recommends to Nelson City and Tasman District Councils that they only accept TVs on a cost recovery basis once the TV Take Back funding has been expended;

AND THAT the Council adopt a cost recovery approach for all Cathode Ray Tubes while a longer term e-cycling solution is developed;

AND THAT both Councils consider writing to the Ministry for the Environment with a copy to local MPs and LGNZ expressing their concern that it is very likely that the TV Take Back funding programme will be insufficient to meet local demand and urge for further funding to be made available. Also urge the Government to institute a Product Stewardship programme for TVs and other e-waste.

Cr Shaw/Cr Dowler CARRIED

7.0 Solid Waste Buller Residual Waste **59-62**

Document number 1472792

J Thiart presented the report to the working party.

The working party discussed the continuing disposal of waste from outside the region, and whether this was desirable. It was agreed to recommend Nelson City Council consider a time limit for on-going disposal. M Hippolite recommended a Cultural Impact Assessment be completed to consider the effects inter-regional transfer of waste.

Resolved:

THAT the report (1472792), Solid Waste Buller Residual Waste, be received;

AND THAT the Joint Waste Working Party recommends that Nelson City Council presents a finite time limit to Buller District Council for the continued use of York Valley for their waste;

AND THAT Buller District Council commission a cultural impact assessment on the inter-regional transfer of waste.

Cr Bryant/M Hippolite CARRIED

7.0 Solid Waste: Nelson – Tasman SWAP Study **63-118**

Document number 1472880

J Thiart presented the report to the working party.

There was discussion among the working party regarding cost of composition studies, and that consideration be given to future studies to be more targeted.

Resolved:

THAT the report (1472880) Nelson – Tasman SWAP study, be received;

AND THAT it be noted that the high tonnage of paper/cardboard in landfills will be further investigated through the waste education contract;

AND THAT staff report back on options and costings for further Nelson-Tasman SWAP studies.

Cr Dowler/CrShaw CARRIED

Waste Management Presentation Ed Kiddle.

Ed Kiddle gave a short presentation on his recent overseas trip to Scandinavia, referring to waste management in this area.

There being no further business the meeting closed at 5.08pm.

Confirmed as a correct record of proceedings:

_____ Chairperson _____ Date

ATTACHMENT 2

Nelson City Council
te kaunihera o whakatū

Joint Waste Working Party

18 April 2013

REPORT 1481324

Solid Waste: Annual Review of Joint Waste Management and Minimisation Plan

1. Purpose of Report

1.1 To consider the progress of the implementation of the Joint Waste Management and Minimisation Plan.

2. Recommendation

THAT the report (1481324), Annual Review Joint Waste Management and Minimisation Plan, be received.

3. Background

3.1 Nelson City and Tasman District Councils adopted the Joint Waste Management and Minimisation Plan (JWMMP) in April 2012. When adopting the plan the Councils also resolved the following:

> *THAT the Joint Waste Working Party meets annually to consider and report progress on the implementation of the Joint Waste Management and Minimisation Plan to Nelson City and Tasman District Councils.*

4. Joint Waste Management and Minimisation Plan: Annual Review

4.1 Progress with the implementation of the JWMMP is recorded in the JWMMP Status Update (Attachment 1).

4.2 The report contains a summary of the status of each method contained in the JWWMP. Progress on most methods is generally on track with expectations.

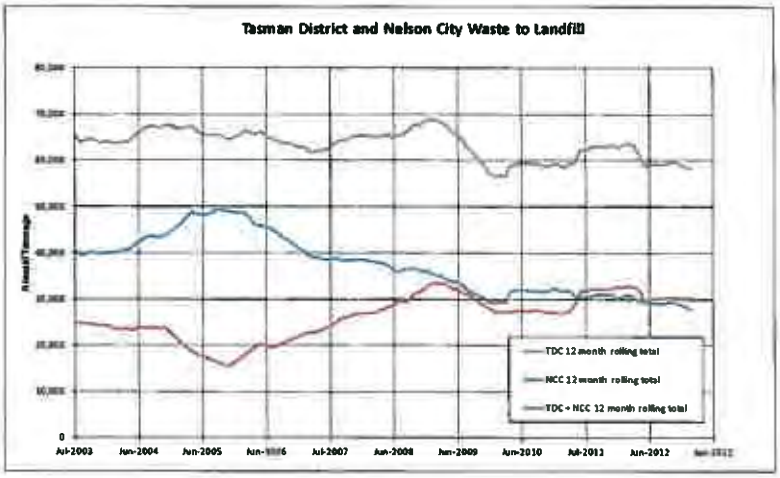
5. Performance Indicators

5.1 Performance indicators, outlined in section 11 of the JWMMP, are intended to monitor the effectiveness of the objectives, policies and methods of the JWMMP. The Councils assess performance indicators annually and they will be reported on their websites and other publications. Each Council will carry out each performance activity as it applies to its District.

5.2 Performance indicators will be generally reported for the period ending 30 June each year. Attached to this report is a summary of the performance indicators to 30 June 2012. Where more up to date information is easily available it has also been included. In some instances data is not easily available because information has not yet been collected for a 12 month period.

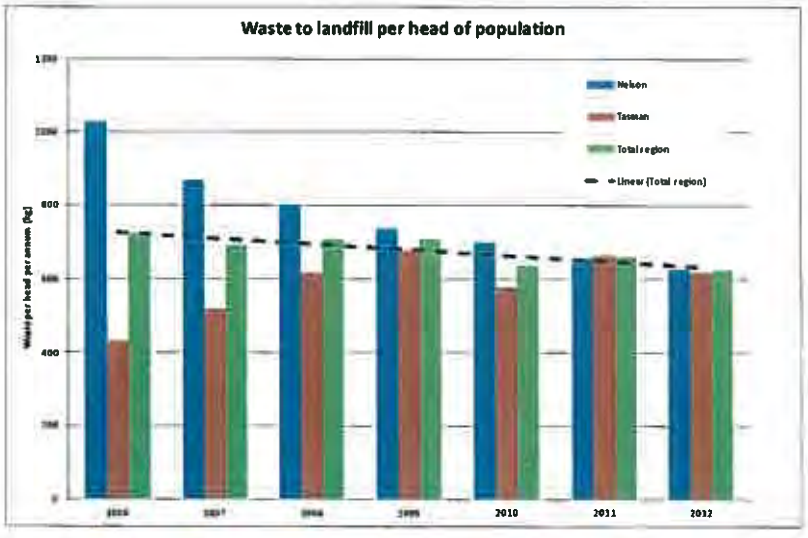
6. Discussion

6.1 The following graph indicates annual waste to landfill per annum over time. As indicated, waste over time has moved between landfills due to commercial behaviour but the quantity of residual waste being disposed of at York and Eves Valley is continuing on a downward trend.



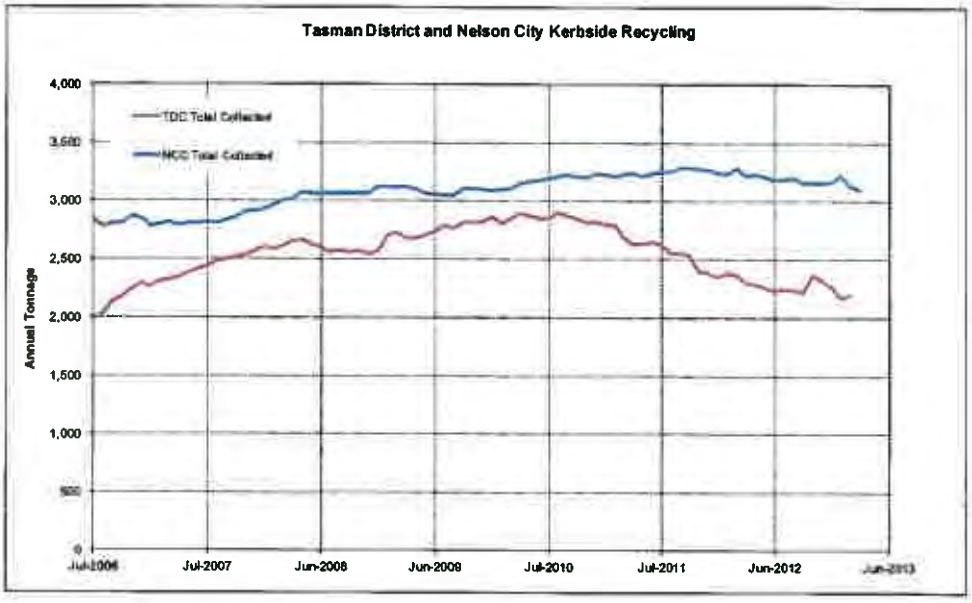
Graph 5.1: Residual waste trends in Nelson/Tasman

6.2 As indicated in the following graph, the regional residual waste per person per annum has decreased steadily over the time. While the data suggests that Nelson waste per head has decreased significantly and Tasman waste increased over time, it is more likely that waste has moved between districts over the period shown.



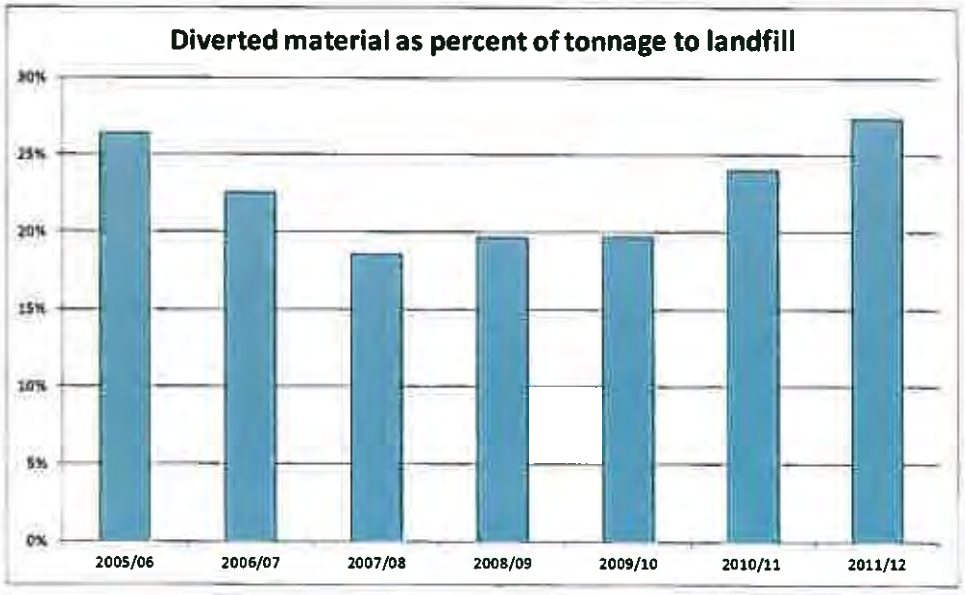
Graph 5.2: Residual Waste per person.

6.3 The following graph indicates kerbside collection quantities for the Councils. Recycling or diverted material has generally been increasing since these programmes were first initiated, although Tasman quantities have decreased recently. These reductions have been due primarily to reductions in glass collected, although total glass recycled has remained reasonable static over time, indicating increased drop-off at Resource Recovery Centres.



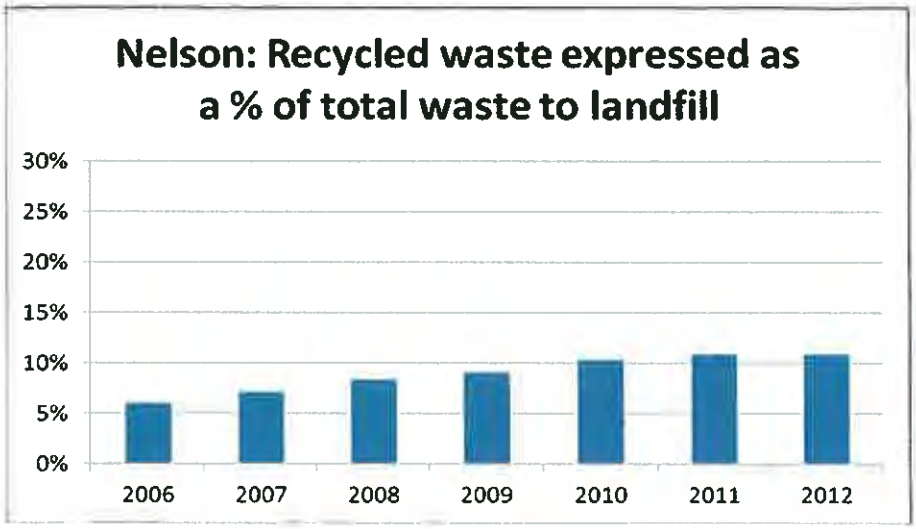
Graph 4.4: Kerbside recycling trends in Nelson/Tasman.

6.4 In Tasman, in addition to kerbside recycling, material is diverted from landfill by the drop-off of materials (including greenwaste) at Resource Recovery Centres. The following graph illustrates diverted material as a percent of landfill waste.



Graph 5.4: Material diverted from Landfill in Tasman

6.5 The quantity of diverted material as a percentage of residual waste disposed of at York Valley has consistently increased over the years.



Graph 4.5: Recycling trends in Nelson.

7. Conclusion

7.1 This report summarises progress with respect to the performance indicators in the Joint Waste Management and Minimisation Plan.

Contact officer: David Stephenson and Johan Thiart

Attachment 1: Joint Waste Management and Minimisation Plan Status Update 1489042

Attachment 2: Annual Indicators 1491123

ATTACHMENT 3

Method	TDC Progress	NCC Progress
Method 1.1.1.1. The Councils will continue to promote and encourage the beneficial reuse of organic material through home composting.	The Councils continue to promote this activity through compost bin subsidies, composting workshops, provision of information and other promotional activities.	
Method 1.1.1.2. The Councils will work with designers, developers, architects, contractors and builders to minimise construction and demolition waste and promote appropriate guidelines and programmes (such as the REBRI [Resource Efficiency in the Building and Related Industries] Guidelines and 'Homestar' and 'Greenstar' programmes).	The Councils continue to promote this activity on a reactive basis through Waste Education Services, contracted services of the Nelson Environment Centre. Information is provided by website via www.wes.org.nz	
Method 1.1.1.3. The Councils will review their kerbside recycling service contracts when appropriate so as to optimise the separation of diverted material in terms of the quality of the diverted material (and the associated commodity price) and the cost of providing a service.	Council is currently considering procurement of the next kerbside collection contract, and this will be included in the consideration.	Will be reviewed as part of Activity Management Plan process and as part of the next recycling contract procurement.
Method 1.1.1.4. The Councils will promote the reuse of materials ahead of the unnecessary consumption of natural resources.	The Councils have recently awarded a new three year joint contract for Community Engagement in Waste Minimisation. The stated purpose of this contract is *"to assist Councils in changing the behaviours of our community so that our community has a culture whose values make waste avoidance and reduction the behaviour of choice."*	
Method 1.2.1.1. The Councils will identify opportunities to develop, implement and promote activities, events and programmes that engage the community, in waste reduction. These programmes will be directed by Council priorities around waste stream reduction. Examples of these activities could be increased composting through links with food growing; cultural health monitoring programmes; zero waste events; industry-focused seminars and case studies; school engagement programmes or programmes supporting the diversion or avoidance of organic waste.		
Method 1.2.2.1. The Councils will provide and promote recycling facilities at their buildings and facilities, subject to availability of appropriate infrastructure and resources.	Council provides recycling facilities at Council offices. Provision of services at other facilities is considered on a case-by-case basis.	
Method 1.2.2.2. The Councils will, in their procurement and purchasing policies, consider ways to achieve effective and efficient waste minimisation.	The Council in its most recent building construction project	No change.

Method	TDC Progress	NCC Progress
	included waste minimisation in the tender specification.	
Method 1.2.2.3. Strategies and resources to support waste avoidance and minimisation at events will be developed, implemented and monitored as part of a programme to engage the community in behaviour change.	The Councils have recently awarded a new three year joint contract for Community Engagement in Waste Minimisation. This work is part included in the scope of the contract.	
Method 1.3.1.1. The Councils will work with industries to implement product stewardship (producer responsibility) as provided for in the Waste Minimisation Act 2008 or through other initiatives (e.g. e-Cycle, Agrecovery, PaintWise).	The Councils are participating in e-Cycle, Agrecovery, PaintWise product stewardship schemes. The Councils have informally advocated for product stewardship through feedback on the TV takeback initiatives.	
Method 1.3.1.2. The Councils will work with local businesses to develop local product stewardship schemes and promote producer responsibility.	No activity in the period.	
Method 1.3.2.1. The Councils will advocate that the central government facilitate the development of national and global markets for diverted material.	No activity in the period.	
Method 1.3.2.2. The Councils will advocate that the central government implement the priority product provisions of the Waste Minimisation Act (for example for tyres and certain electronic products so as to avoid or reduce waste).	The Councils are monitoring progress of Waste Levy funded projects in Tyres and e-waste with respect to priority product provisions.	
Method 1.3.2.3. The Councils will advocate that the central government investigate and introduce legislation, levies and regulations, especially in relation to products, to encourage cleaner production, packaging design controls and other means of waste minimisation.	No activity in the period.	
Method 1.3.3.1. The Councils will consider collaboration in the procurement of new waste and diverted material services and the renewal of existing services.	The Councils have recently awarded a new three year joint contract for Community Engagement in Waste Minimisation. The Councils will consider collaboration in any upcoming procurement.	
Method 1.3.3.2. The Councils will work proactively with each other, iwi, local organisations, regional and national stakeholders, private sector parties and other territorial authorities on matters relating to waste reduction.	Council staff continue to proactively together on waste related issues. The Councils have resolved to include iwi and health board representation on the joint waste working party. Council staff communicate regularly with staff from other Local Government organisations.	

Method	TDC Progress	NCC Progress
Method 1.3.3.3. The Councils will advocate as they consider appropriate that the central government investigate and introduce legislation, levies and regulations to encourage reduced production of waste, and to introduce an applicable genuine progress index.	No activity in the period.	
Method 2.1.1.1. The Councils will continue to provide kerbside recycling collection services to most urban properties.	The Councils continue to provide kerbside recycling services to most urban properties.	
Method 2.1.1.2. The Councils will continue to provide facilities for the diversion of materials that may otherwise become waste.	No change	No change
Method 2.1.1.3. The Councils will continue to investigate public place and events recycling opportunities (e.g Love NZ recycling stations) and implement these where appropriate.	The Councils continue to respond to requests for assistance in this area on a case-by-case basis. Nelson City are working with commercial operators to develop a commercial service for events.	
Method 2.1.2.1. The Councils will investigate increased recovery of organic material via improved services and facilities and appropriate pricing strategies.	The Councils have recently completed a composition survey ("SWAP analysis") of waste at York Valley, Richmond and Mariri. The results of this work will feed into these investigations.	
Method 2.1.2.2. The Councils will investigate market development for reuse/recycling of recovered construction and demolition materials, including waste exchanges.	No activity in the period.	Addressed in AMP development.
Method 2.1.2.3. The Councils will investigate expanding the range of recyclables collected through kerbside collection, resource recovery centres and refuse transfer stations.	This will be considered in upcoming procurement of services in 2013.	Addressed in AMP development.
Method 2.1.2.4. The Councils will continue to investigate and develop markets for the reuse and recycling of glass.	The kerbside contractor exports glass for bottle to bottle recycling. The Council is investigating provision of a regional flat glass recycling service in Richmond.	Recycling contractor mandated to carry this out.
Method 2.1.2.5. The Councils will encourage or promote the use of products derived from the composting of discarded or unwanted organic material.	The Councils have recently awarded a new three year joint contract for Community Engagement in Waste Minimisation. This work is part included in the scope of the contract.	

Method	TDC Progress	NCC Progress
Method 2.1.3.1. The Councils will work proactively with each other, local organisations, other territorial authorities, private sector parties, iwi and the wider community through various ways (such as a solid waste forum) on matters relating to waste management and minimisation.	Council staff continue to proactively together on waste related issues. The Councils have resolved to include iwi and health board representation on the joint waste working party. Council staff communicate regularly with staff from other Local Government organisations and with other organisations where opportunities arise. Establishment of a solid waste forum has not been considered yet by the Councils.	
Method 2.1.3.2. The Councils will, in procuring waste minimisation services, consider different methods and assess these in terms of environmental, social, cultural and economic factors.	These factors will be considered in procurement, subject to the provisions of the Local Government Act.	Considered as part of contract procurement process.
Method 2.1.3.3. The Councils will work with organisations and businesses across the community to provide waste minimisation services, such as greenwaste services, in areas where there are no such services provided by the Councils.	An additional greenwaste collection service has been established recently in Richmond and Nelson. The Councils gave constructive feedback to the operator prior to launching of the service.	
Method 2.2.1.1. The Councils will investigate improving facilities that receive separated diverted material, such as construction and demolition material, at the refuse transfer station and the resource recovery centres.	No project identified at present.	
Method 2.2.1.2. The Councils will jointly investigate improving existing materials recovery facilities or a new facility that enhances the diversion of recyclable materials, particularly to accommodate paper and cardboard.	This will be considered in upcoming procurement of services.	No project identified at present.
Method 2.2.1.3. The Councils will jointly investigate facilities that enhance the diversion of organic materials (e.g. organic kitchen scraps and garden foliage).	This work will follow implementation of Method 2.1.2.1	
Method 2.2.1.4. The Nelson City Council will co-operate with third parties for the provision of re-use facilities at the Pascoe Street transfer station the Tasman District Council will continue the Richmond re-use shop and re-useable item services at selected resource recovery centres.	Provision of these services will be included in upcoming procurement of services.	Status quo continued.
Method 2.2.2.1. The Councils will investigate expanding the range and quantity of recyclables collected through kerbside collection, resource recovery centres and refuse	This will be considered in upcoming procurement of	Considered as part of contract procurement

Method	TDC Progress	NCC Progress
transfer stations.	services in 2013.	process.
Method 2.2.2.2. The Councils will submit as appropriate on waste and diverted material issues in Tasman and Nelson Resource Management Plan reviews. This will include submitting in support of improved provisions for kerbside waste and diverted material collections in road and sub-divisional design and improved provisions for on-property waste and diverted material storage and access to such storage in medium or high density developments and the central business districts.	No activity in the period.	Status quo continued.
Method 2.2.3.1. The Councils will provide for separated mixed dry recyclables at the kerbside in a way that ensures the quality of material collected is maintained.	Status quo maintained.	
Method 2.2.4.1. The Councils will provide levels of service in the LTP that are consistent with the provisions of the JWMMP.	Addressed in Activity Management Plan development.	
Method 2.2.4.2. Each Council will carry out a review of the facilities and services it provides for purposes that include ensuring that the goals and objectives of the JWMMP are being achieved, and the services and facilities are being managed and operated so as to be fit for purpose during the period of the JWMMP.	Addressed in Activity Management Plan development.	
Method 2.2.4.3. Each Council will use the results of the review of their waste management and minimisation facilities and services to guide the preparation of its solid waste activity management plan.	Addressed in Activity Management Plan development.	
Method 2.2.5.1. The Councils will include provisions for monitoring the quantity and quality of diverted material against specified performance indicators in contracts for the services and facilities provided by the Councils.	This will be considered in upcoming procurement of services in 2013.	Considered as part of contract procurement process.
Method 2.2.5.2. The Councils will review the questions in their annual community surveys so that answers can be used to provide a better understanding of how the community views the waste management and minimisation services available in the Districts.	This work is in progress.	
Method 2.2.5.3. The Councils will monitor the Districts' waste and diverted material streams using information sourced from Council services and information sourced from persons providing private waste management and minimisation services (including the monitoring of quantities and compositions of waste streams, origins and destinations of waste and ongoing management of cleanfills and closed landfills).	Status quo maintained. Recent SWAP analysis will assist in monitoring. The Council will consider surveying private operators for information in the future.	

Method	TDC Progress	NCC Progress
Method 2.2.5.4. The Councils will monitor the need for control of identified problematic waste and will investigate methods of control when a need is established, including advocating priority product status under the WMA.	The Councils are monitoring progress of Waste Levy funded projects in Tyres and e-waste with respect to priority product provisions.	
Method 2.2.5.5. The Councils will monitor complaints about waste management and minimisation and will improve the data capture in its customer service databases to enable effective tracking of waste management and minimisation complaints.	The customer service request system is currently under review. This will be considered in this work.	Status quo maintained.
Method 2.2.5.6. The Councils will monitor behaviour change programmes and consider the use of programmes where they have been demonstrated to be effective elsewhere and are applicable to local circumstances.	Addressed in AMP development and development of waste minimisation community engagement programmes.	
Method 2.2.5.7. The Councils will monitor the need to extend services in terms of both diverted material types, such as organic material, and the geographical extent of services.	This will be considered in upcoming procurement of services in 2013.	Addressed in AMP development.
Method 2.3.1.1. The Councils will create and maintain and promote information on their websites about waste management and minimisation services available within the Districts and elsewhere including the performance indicators. Information may include, for example, a schedule of diverted material types and associated diversion services, the locations of dump stations for camper van waste and stock truck waste.	Websites reviewed annually and amended as required. Waste minimisation information provided via www.wes.org.nz	
Method 2.3.1.2. The Councils will provide appropriate information including signage to inform visitors about waste minimisation facilities and services.	Information provided via publications such as summer events guide and freedom camping brochure. Signage provided as appropriate.	
Method 3.1.1.1. Tasman District Council will provide kerbside refuse collection in residential areas and additional areas as determined through the LTP process and will continue to provide facilities at the resource recovery centres. This may be subject to change following the result of implementing method 3.1.1.3.	This will be considered in upcoming procurement of services in 2013.	N/A.
Method 3.1.1.2. Nelson City Council will facilitate refuse collection through use of private service providers and will continue to provide a refuse transfer station. This may be subject to change following the result of implementing method 3.1.1.3.	N/A	No change.
Method 3.1.1.3. The Councils will review from time to time, the refuse collection services within their respective Districts and consider the joint delivery of service	This will be considered in upcoming procurement of	Addressed in AMP development. Joint

Method	TDC Progress	NCC Progress
delivery, levels of service, scope of service and service provider (ie. those provided by the Councils and/or private sector services).	services in 2013 and development of Activity Management Plan.	delivery of services no considered a priority at present.
Method 3.1.1.4. Nelson City Council will continue to provide commercial access to the York Valley Landfill and Tasman District Council restricted access to the Eves Valley Landfill for waste disposal until a joint waste disposal solution has been agreed (see Method 3.1.5.1).	Status quo maintained. Joint landfill options being investigated.	
Method 3.1.1.5. The Councils will provide public collection receptacles and litter bins and remove illegally dumped waste from roadsides and streets in accordance with their responsibilities under the Litter Act (1979).	Continue status quo.	
Method 3.1.1.6. The Councils will consider the provisions of the Freedom Camping Act 2011 in terms of administering its provisions and addressing waste and diverted material matters in a by-law.	Development of by-law in early stages at present.	
Method 3.1.1.7. The Councils will continue with current practices of wastewater treatment plant sludge disposal and investigate opportunities, in addition to the Bell Island land application, for the beneficial use of such sludge elsewhere, taking into account cultural, environmental and public health considerations.	Disposal of sludge from Motueka WWTP under active consideration at present. These factors will be considered.	Maintain status quo.
Method 3.1.2.1. The Councils will provide hazardous waste drop-off facilities at transfer stations and resource recovery centres, where practicable, for household hazardous waste and agrichemicals to an extent that they are affordable and complement national schemes or services.	Provision of drop-off facilities at Takaka are currently under review. Consideration is being given to requiring disposal to a single regional location.	Status quo maintained.
Method 3.1.3.1. Where practicable, the Councils will maintain a user-pays basis for waste services to ensure that waste generators meet the costs of the waste that they produce.	Implemented in part across the district. Income for disposal of waste at Mariri, Takaka, Collingwood and Murchison is significantly less than actual cost and requires general rate funding.	Solid waste account is ring fenced. All waste management and minimisation activities are funded from solid waste activities.
Method 3.1.3.2. The Councils will carry out financial reviews of their waste	Considered in the development of Activity Management Plan	

Method	TDC Progress	NCC Progress
management and minimisation level of services. These reviews will take account of the implications or outcome of Method 3.1.5.1. The financial reviews will consider the costs and funding of the services and facilities and identify possible more cost effective ways of achieving the requirements of the JWMMP.	and following completion of Method 3.1.5.1.	
Method 3.1.3.3. The Councils will carry out financial reviews of disposal charges to encourage the separation and diversion of materials as alternatives to waste disposal to landfill.	Considered as part of Annual Plan process.	
Method 3.1.4.1. The Councils will review annually the provision of non-user pays services in terms of the public good they provide and the costs of the services and activities.	Considered in the development of Activity Management Plan	Considered as part of Annual Plan process.
Method 3.1.4.2. The Councils will use income from waste management services and facilities to partially fund waste minimisation services and activities.	Achieved.	
Method 3.1.4.3. The Councils will consider developing a fund within the Districts, using a portion of the waste levy funds, to encourage the development of waste minimisation initiatives.	Zero Waste Grant scheme in place. Councils may consider a joint fund in future.	
Method 3.1.5.1. The Councils will investigate a joint landfill solution as a matter of priority in the first year this plan is operative (and the options will include using one landfill as a regional facility serving both Districts or that the two landfills will be used for separate materials).	Progress reported under separate report.	
Method 3.1.5.2. Nelson City Council will continue its shareholding in the York Valley Landfill Gas Recovery programme, and the beneficial use of the gas.	N/A	Status quo maintained.
Method 3.1.5.3. The Councils will consider what the implications are for each District in implementing the Climate Change (Waste) Regulations 2010 and associated regulations.	Allowed for in Annual Plan.	Allowed for in Annual Plan. Integrated into the development of new and existing services.
Method 3.1.5.4. The Councils will continue to investigate governance options for managing joint waste management facilities as a matter of priority.	Addressed under separate report. It is proposed to be considered following completion of Method 3.1.5.1.	
Method 3.1.6.1. The Councils will continue to provide a landfill disposal service for the disposal of approved waste that is sourced from within the Districts.	Status quo maintained.	

Method	TDC Progress	NCC Progress
Method 3.1.6.2. The Councils will manage the landfill service such that consented landfill airspace is monitored and maintained so as to ensure there is a least five years airspace available at any time.	The current disposal consent for Eves Valley expires in September 2015. Council will implement a consenting strategy in September 2013 depending on outcome of Method 3.1.5.1.	More than 20 years airspace available at York Valley.
Method 3.1.6.3. The Councils will jointly consider any application for the disposal of approved waste generated from outside the two Districts.	New applications referred to Joint Waste Minimisation Working Party for consideration.	
Method 3.2.1.1. The Councils will prepare management plans for Council waste management facilities (including closed landfills) that they own or activities for which they hold resource consents. Each plan will identify actions and responsibilities associated with the land, the facility development, the operation, and operational and environmental monitoring. The plan will be based on statutory requirements and good practice and significant cultural values, and will form the basis of any assignment of responsibilities, such as through contracts or leases.	Council has management plans in place for Eves Valley landfill, Resource Recovery Centres and closed landfills.	Status quo maintained.
Method 3.2.1.2. The Councils will monitor Council facilities and Council closed landfills in accordance with the requirements of the management plans and will review the effectiveness of the management plans periodically.	Council is currently updating management plans for RRC's.	Status quo maintained.
Method 3.2.1.3. The Councils will ensure that solid waste services are managed in such a way as to minimise public health issues.	Status quo maintained.	
Method 3.2.2.1 The Councils will propose solid waste by-laws for the purpose of addressing issues identified in the Joint Waste Assessment as being suitably addressed by a by-law, including the licensing of persons providing waste and diverted material services.	Development of by-law in early stages at present. Councils will need to consider whether a by-law is the most appropriate mechanism in each circumstance.	
Method 3.2.2.2. The Councils will submit as appropriate on issues in the next Tasman and Nelson Resource Management Plan reviews.	No activity in the period.	Status quo maintained.
Method 3.2.2.3. Tasman District Council will consider a rule change in its Resource Management Plan (TRMP) for private cleanfills to control the location and material accepted at cleanfill sites and collect data.	This is being currently considered in conjunction with a review of the land disturbance rules. The merit of	N/A

Method	TDC Progress	NCC Progress
	changes will be considered in conjunction with consideration of control via a by-law.	
Method 3.2.2.4. The Councils will investigate regulating the disposal of materials to landfill and cleanfill and the collection of data through solid waste by-laws and advocate to Central Government for greater controls of cleanfills.	Development of by-law in early stages at present. Council will need to consider whether a by-law is the most appropriate mechanism in each circumstance. Council monitoring recent national activity around cleanfill compliance and review of landfill guidelines.	Need not yet established. Managed through RMA.
Method 3.2.2.5. The Councils will work with the Environmental Protection Authority to communicate business responsibilities for hazardous waste.	No activity in the period.	
Method 3.3.1.1. The Councils will require that operators at council facilities observe good health and safety practice, including training in health and safety matters associated with different materials.	Considered as part of contract procurement process.	
Method 3.3.1.2. The Councils will provide a variety of education and behaviour change programmes that raise awareness about the hazards of waste and waste minimisation, and about safe practice at facilities and with services.	The Councils have recently awarded a new three year joint contract for Community Engagement in Waste Minimisation. The stated purpose of this contract is *"to assist Councils in changing the behaviours of our community so that our community has a culture whose values make waste avoidance and reduction the behaviour of choice."*	
Method 3.3.1.3. The Councils will consider minimum safety standards as a condition of licensing under the proposed solid waste by-laws.	Development of by-law in early stages at present. Council will need to consider whether a by-law is the most appropriate mechanism in each circumstance.	
Method 3.3.1.4. The Councils will engage with stakeholders where appropriate in programmes which educate and raise awareness around waste and diverted material safety issues. For example: The Councils will consider working with Iwi to identify, record and protect cultural values and uses associated with land and water.	Invitation extended to Iwi to nominate up to two representatives to joint the Joint Waste Working Party.	

Annual Indicators

Performance Indicator	Activity	Frequency of Activity	Nelson City Council progress	Tasman District Council progress
Consumer behaviour survey in regards to waste minimisation activities.	Customer survey.	3 yearly.	No activity in the period.	No activity in the period.
The composition of waste to landfill.	Composition surveys (Solid Waste Analysis Protocol - SWAP).	Periodically.	SWAP analysis completed twice in 2012.	SWAP analysis completed twice in 2012.
Number of households that carry out home composting.	Survey to assess number of households doing home composting.	Annually.	No survey was carried out during 2011/12.	Survey is being considered for 2012/13
The quantity (kg) of waste per capita to landfill.	Analyse quantities on a per person basis.	Annually	627 kg estimated population 46,600 at June 2012	619 kg estimated population 48,400 at June 2012
Quantities of waste to landfill.	Analyse quantities.	Annually	30 June 2012: 29,228 t 28 Feb 2013: 27,789 t	30 June 2012: 29,974 t 28 Feb 2013: 30,314 t
	Identify source data in accordance with MfE guidelines.	Annually	Achieved. Information is recorded in monthly MfE Waste Levy returns.	Achieved*. Information is recorded in monthly MfE Waste Levy returns.
Quantities of diverted material handled by the Councils (and private sector where available).	Monitor quantities on a per person basis.	Annually.	69kg per person per annum.	Will be tabled.

1491123

Annual Indicators

Performance Indicator	Activity	Frequency of Activity	Nelson City Council progress	Tasman District Council progress
	Monitor diverted material as a proportion of waste to landfill.	Annually.	16%	27%
Customer satisfaction of transfer stations, resource recovery centres and kerbside services.	Customer surveys.	Periodically.	No survey carried out during 2011/12	Survey completed Dec 2012 – Jan 2013.
Schedule of diverted material types and services available.	Maintain schedule of diverted material types and new developments in the sector.	Annually.	Information for Council services is recorded on Council website. Private operator information recorded on www.wes.org.nz .	Information for Council services is recorded on Council website. Private operator information recorded on www.wes.org.nz .
All Council solid waste activities, facilities and services comply with resource consent conditions, site management plans and other appropriate legislative requirements.	Check that sites have the necessary consents and that breaches of consent conditions are addressed in timely manner.	Annually	Complying.	Will be tabled.
Customer satisfaction in relation to collection of refuse and diverted material.	Customer survey.	Periodically.	62%	Will be tabled.
Inquiries received through the Councils' service request system addressed within 24 hours.	Summarise the nature and time of inquiries relevant to waste and diverted material services.	Annually.	Activity 2011/12 (10/11) Recycling: 25 (9) Dumped: 172 (171) General: 64 (35) 94% completed on time.	Data being compiled.
Number of notices from Health	Maintain record of	Annually.	None received for the	None received for the

Annual Indicators

Performance Indicator	Activity	Frequency of Activity	Nelson City Council progress	Tasman District Council progress
Protection Officer on the Council for causing nuisance (s55 of WMA).	notices.		period.	period.
Lost time injuries in the Councils' contracted waste management and minimisation services.	Summarise records.	Annually.	Data being compiled.	Data being compiled.

REPORT 1520672

Princes Drive Upgrade

1. Purpose of Report

1.1 To approve the award of the tender for the Princes Drive physical works upgrade contract.

2. Recommendation

THAT the tender for the upgrade of Princes Drive for $1,282,319 from Donaldson Civil be approved.

3. Background

3.1 The project involves the construction of a footpath along a narrow and twisty portion of Princes Drive to improve pedestrian safety.

3.2 To mitigate the effects of landslips following the December 2011 Rainfall Event, significant retaining walls are also included in the upgrade.

4. Discussion

Budget

4.1 The 2012-22 Long Term Plan (LTP) provided a budget of $1,074,445 for this footpath installation.

4.2 The balance to cater for the retaining walls is to be funded from the December 2011 Recovery Account and provision has been made for this.

4.3 To date $43,611 has been spent on detailed design.

Tenders

4.4 Tenders were requested on 30 April 2013 and closed on 23 May 2013.

4.5 Tenders were received from four contractors and were evaluated using the NZTA Procurement Manual Price Quality methodology.

4.6 The highest ranked tender (and in this case also the lowest price) was Donaldson Civil, with a price of $1,282,319. The prices ranged from $1,282,319 to $1,377,107.

4.7 The estimate to complete the project is detailed below and shows adequate budget to complete the work.

Tender Price	Total Estimate including Contingency and Professional Fees	Budget
$1,282,319	$1,449,435	Funded from: Unsubsidised rdg - $1,030,834 December 2011 Recovery fund - $418,601

4.8 It is expected that work will commence in August 2013 and will take 25 weeks to complete.

5. Conclusion

5.1 Tenders have been called and evaluated for this project.

5.2 The project is identified in the 2012-22 LTP.

5.3 Additional works including retaining walls to cater for the December 2011 Rainfall Event have been included in the scope of work.

5.4 Adequate funding is in place to cover the total estimated expenditure of $1,450 million from the LTP and December 2011 Recovery Fund.

Phil Hamblin
Manager, Capital Projects

Attachments

None.

Supporting information follows.

Princes Drive Upgrade

Supporting Information

1. Fit with Purpose of Local Government

The new footpath will enhance pedestrian safety and will provide high quality public infrastructure and public service.

2. Fit with Community Outcomes and Council Priorities

Providing new infrastructure contributes to a strong economy, safe community and good leadership.

3. Fit with Strategic Documents

Scheme included in Roading Asset Management Plan.

4. Sustainability

Creating strong infrastructure contributes to a sustainable community.

5. Consistency with other Council policies

Asset management plans.

6. Long Term Plan/Annual Plan reference and financial impact

Funding has been provided in the 2012-2013 LTP and in the December 2011 Recovery Fund.

7. Decision-making significance

This is not a significant decision in terms of the Council's Significance Policy.

8. Consultation

Consultation has been undertaken through the LTP.

9. Inclusion of Māori in the decision making process

Maori have not specifically been contacted with respect to this project.

10. Delegation register reference

The Chief Executive prefers approvals for tenders over $1 Million to be a Council decision.

REPORT 1528300

Parking and Vehicle Control Bylaw (2011), No.207

Amendments to Schedules

1. Purpose of Report

1.1 To adopt the alterations to the Parking and Vehicle Control Bylaw (2011) that have resulted from; roading improvements carried out as part of the 2012/13 capital works programme and from the completion of new subdivisions.

2. Recommendation

***THAT** the following alterations to the Schedules of Bylaw No 207, Parking and Vehicle Control (2011) be approved:*

- ***Schedule 5: Metered Parking;***
- ***Schedule 8: Time Limited Parking Areas;***
- ***Schedule 9: No Stopping;***
- ***Schedule 14: Give Way Signs.***

3. Background

3.1 The Parking and Traffic Control Bylaw 2011 allows for the Council, by resolution, to add or delete items to the Schedules. To ensure that the Bylaw is enforceable it is important to ensure that the Schedules are updated on a regular basis. The following Schedules of the Bylaw require amending due to changes in land use and circumstances, since the last update in March 2012.

4. Discussion

Queens Road

4.1 A 'shared zone' was implemented for vehicles, cyclists and pedestrians and included the upgrade of the existing road; and sewer, storm water and water utilities. As part of this two new 'give way' signs were added, five new parking spaces were provided and no stopping line locations were adjusted as per Attachment 1.

Main Road Stoke Entrance to Saxton Field

4.2 This capital project involved the construction of a new entrance to Saxton Field from Main Road Stoke. New 'no stopping' line markings have been provided at the approaches to the new entrance and a new 'give way' sign and markings have been added for Saxton Field traffic entering Main Road Stoke. Refer to Attachment 2.

Rutherford Street Resurfacing

4.3 This project was undertaken to renew the surface of Rutherford Street from Halifax Street to Snows Hill at Waimea Road. A review of the road markings was carried out in conjunction with the resurfacing work and this enabled the length of existing 'no stopping' lines to be reduced and seventeen car parking spaces to be added. Three of these parking spaces will be metered and a further two will be time limited. Refer to Attachment 3.

Toi Toi Street / Vanguard Street Shared Path

4.4 A shared path has been constructed within Toi Toi Street and around Victory Square to connect Vanguard Street to Gorrie Street. The new path continues along Vanguard Street from Toi Toi Street to North Esk Street. New 'no stopping' lines have been added adjacent to Toi Toi and Vanguard Streets as per Attachment 4.

Subdivisions

4.5 The following subdivisions have been completed (refer Attachment 5):

- Princes Drive southern extension
- Buckingham Court (off Princes Drive)
- Clarence Drive (off Princes Drive)
- Sunningdale Drive extension

5. Conclusion

5.1 The 2012/13 capital works programme has included the upgrade and renewal of several Nelson Streets for safety and maintenance purposes. Also, Nelson's roading network is growing as new subdivisions are completed. As part of this, minor alterations and additions have been made to the schedules of the Parking and Vehicle Control Bylaw (2011). It is recommended that the alterations and amendments to the schedules are approved as detailed above.

Shane Davies
Manager Roading and Solid Waste

Attachments

Attachment 1: Queens Road 1528700

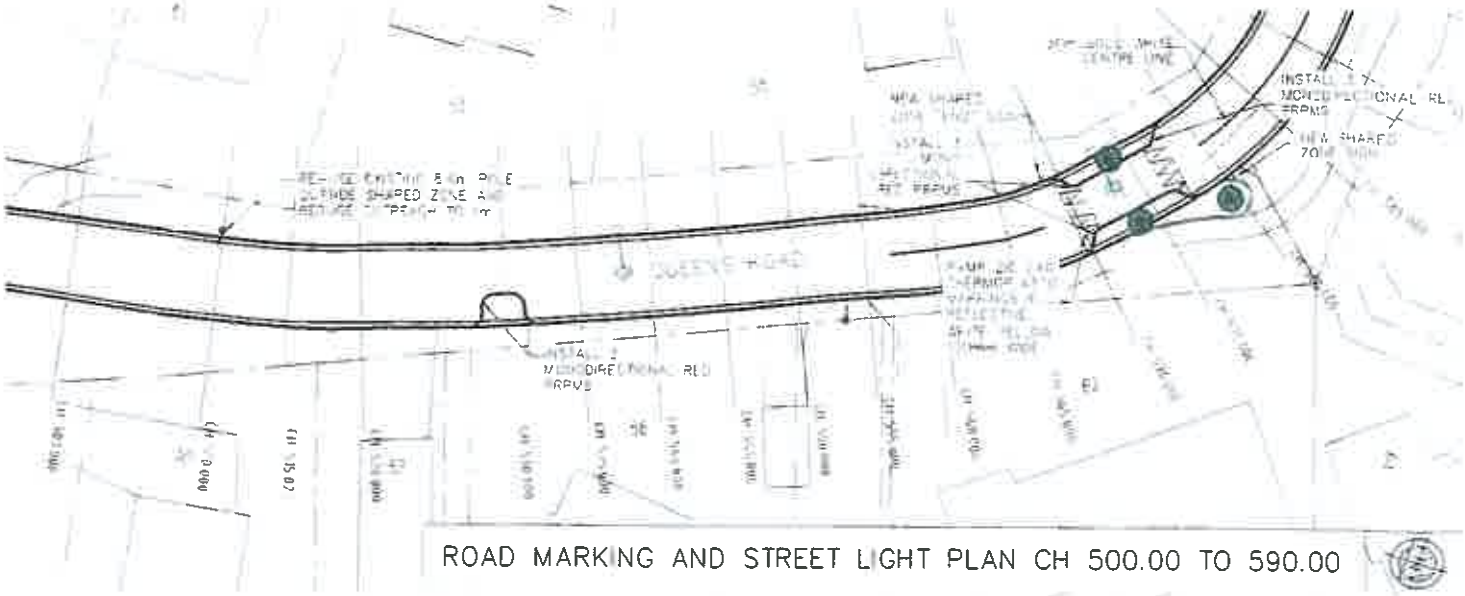
Attachment 2: Main Road Stoke entrance to Saxton Field 1528738

Attachment 3: Rutherford Street resurfacing 1528723

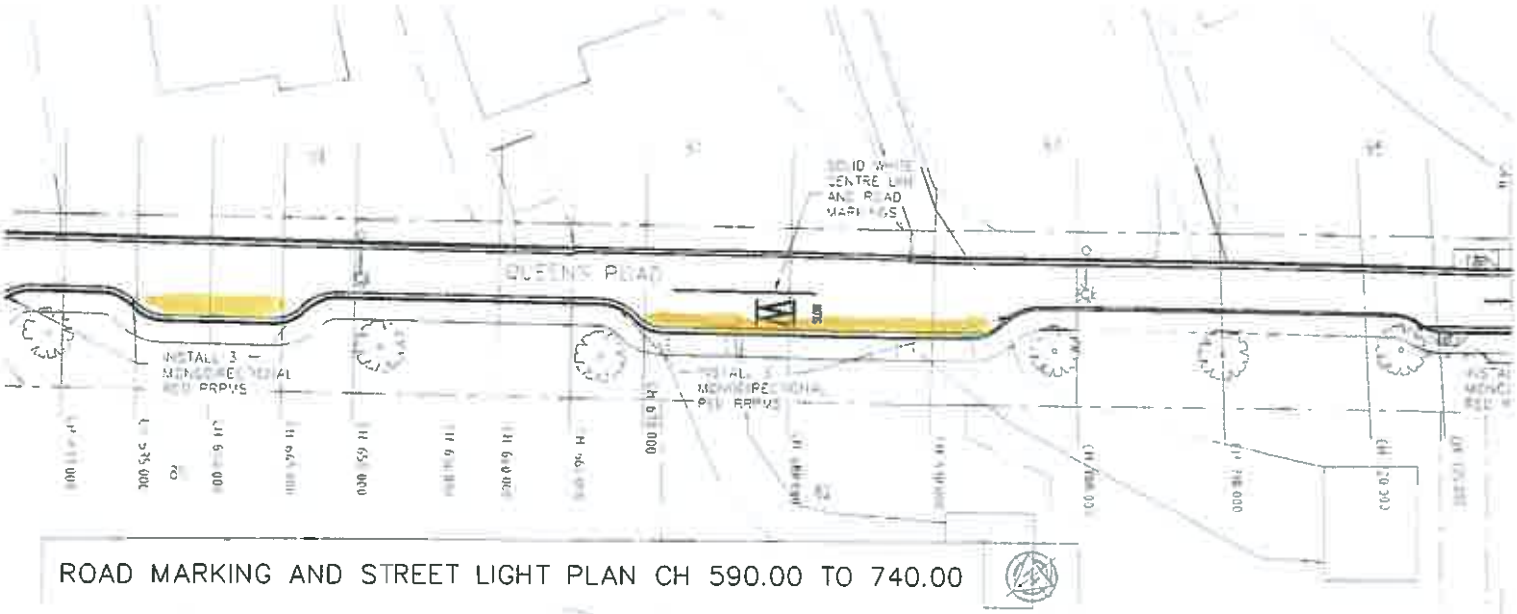
Attachment 4: Toi Toi Street / Vanguard Street Shared Path 1528688

Attachment 5: Subdivisions 1528724

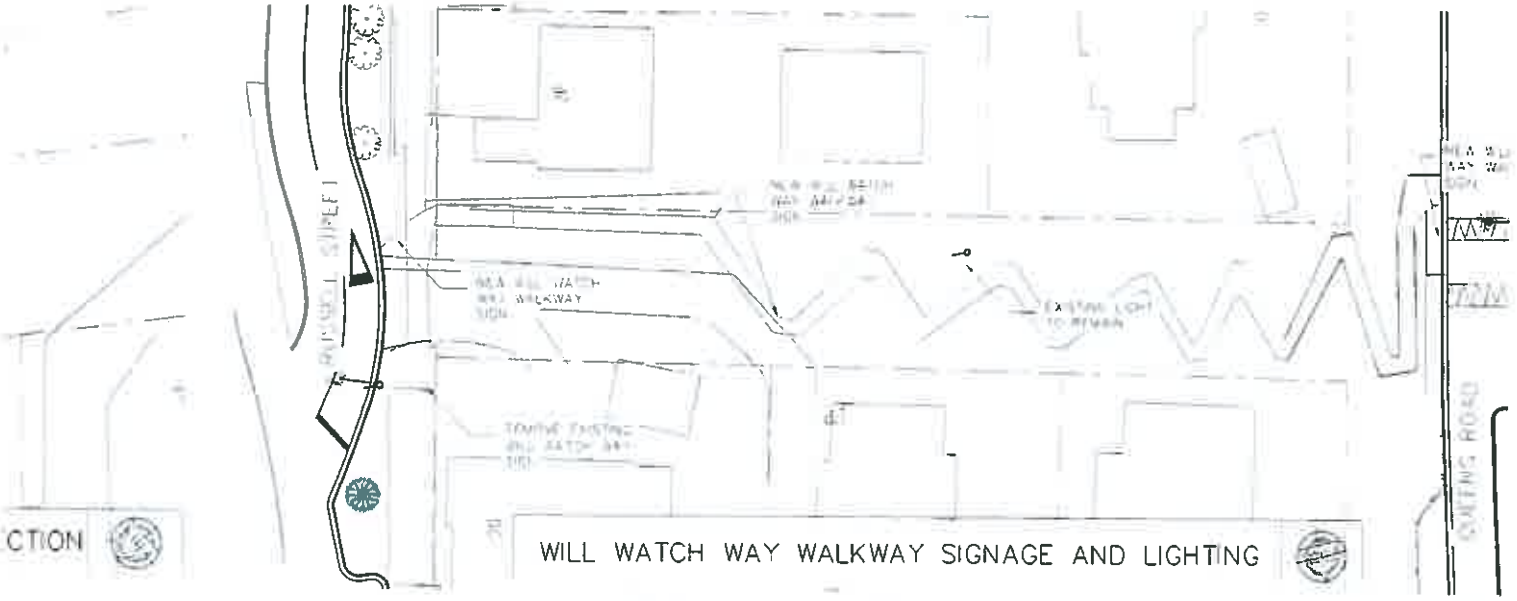
No supporting information follows.



ROAD MARKING AND STREET LIGHT PLAN CH 500.00 TO 590.00



ROAD MARKING AND STREET LIGHT PLAN CH 590.00 TO 740.00



CTION

WILL WATCH WAY WALKWAY SIGNAGE AND LIGHTING

		APPROVED	J.LARGE/M.PRICE	P.HAMBLIN	1:250			
		EXECUTIVE MANAGER NETWORK SERVICES	M.PRICE	P.HAMBLIN				
'ICTORIA HT		DATE	M.PRICE	Not Set				
			MAY 2010	J107292	EC3170			

1528700

pdf 1537975

ATTACHMENT 2 MAINROAD STOKE / SAXTON FIELD

#1528738

pdf 1537975

ATTACHMENT 3 RUTHERFORD ST.

RUTHERFORD STREET LINEMARKING IMPROVEMENTS

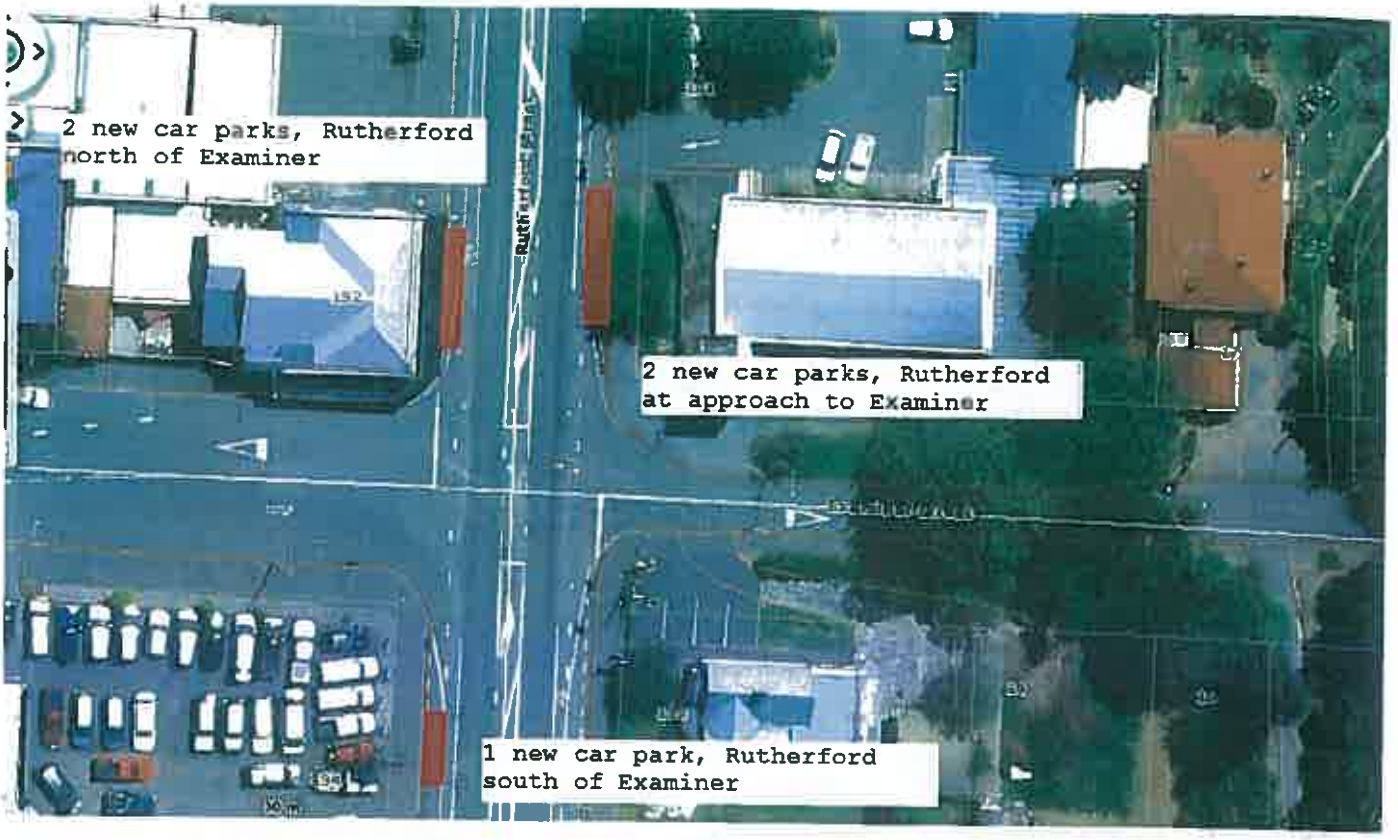
Changes to Car Parks

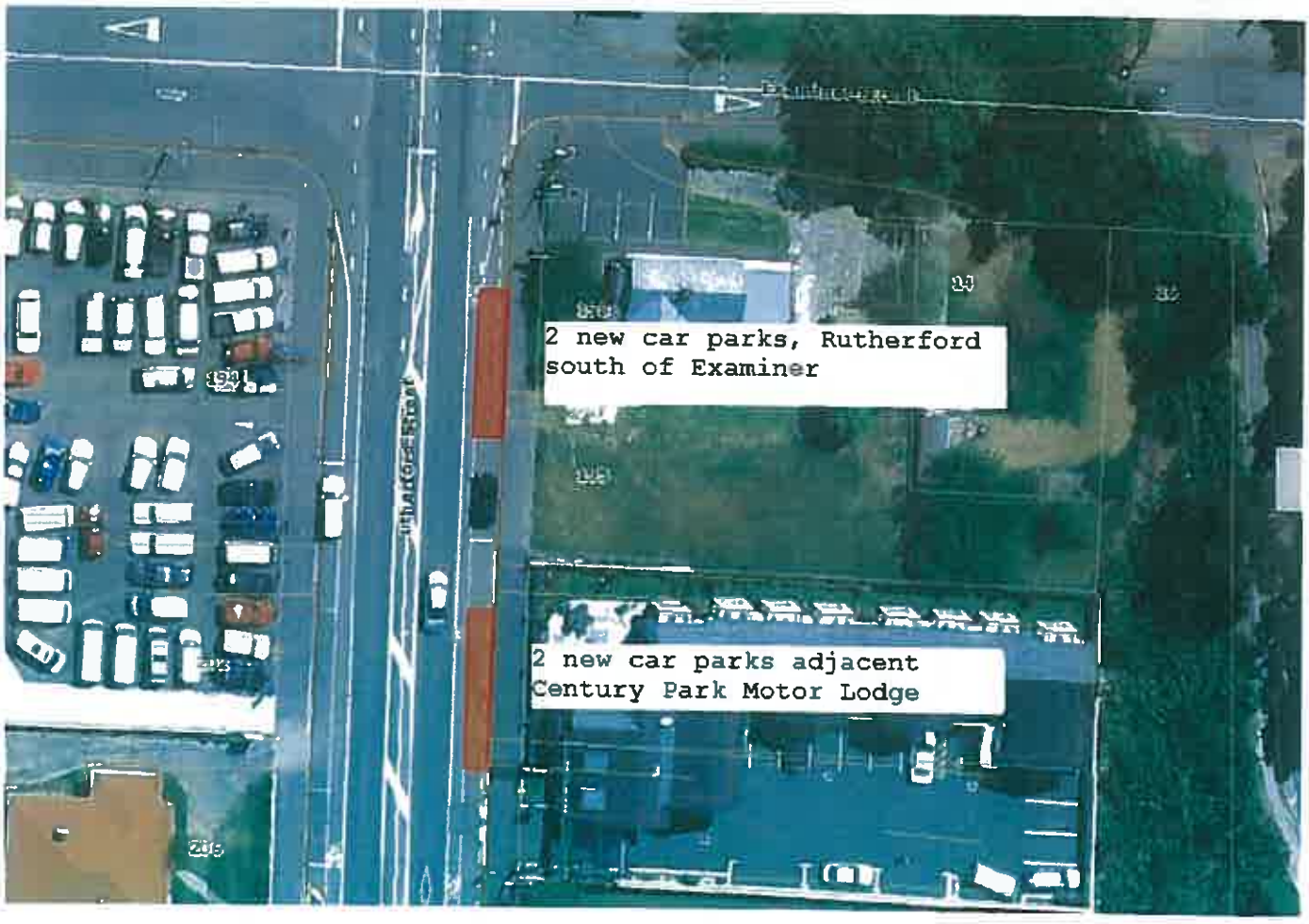
#1528723

pdf 1537975


2 new metered P120 car parks,
Rutherford opposite Vanguard

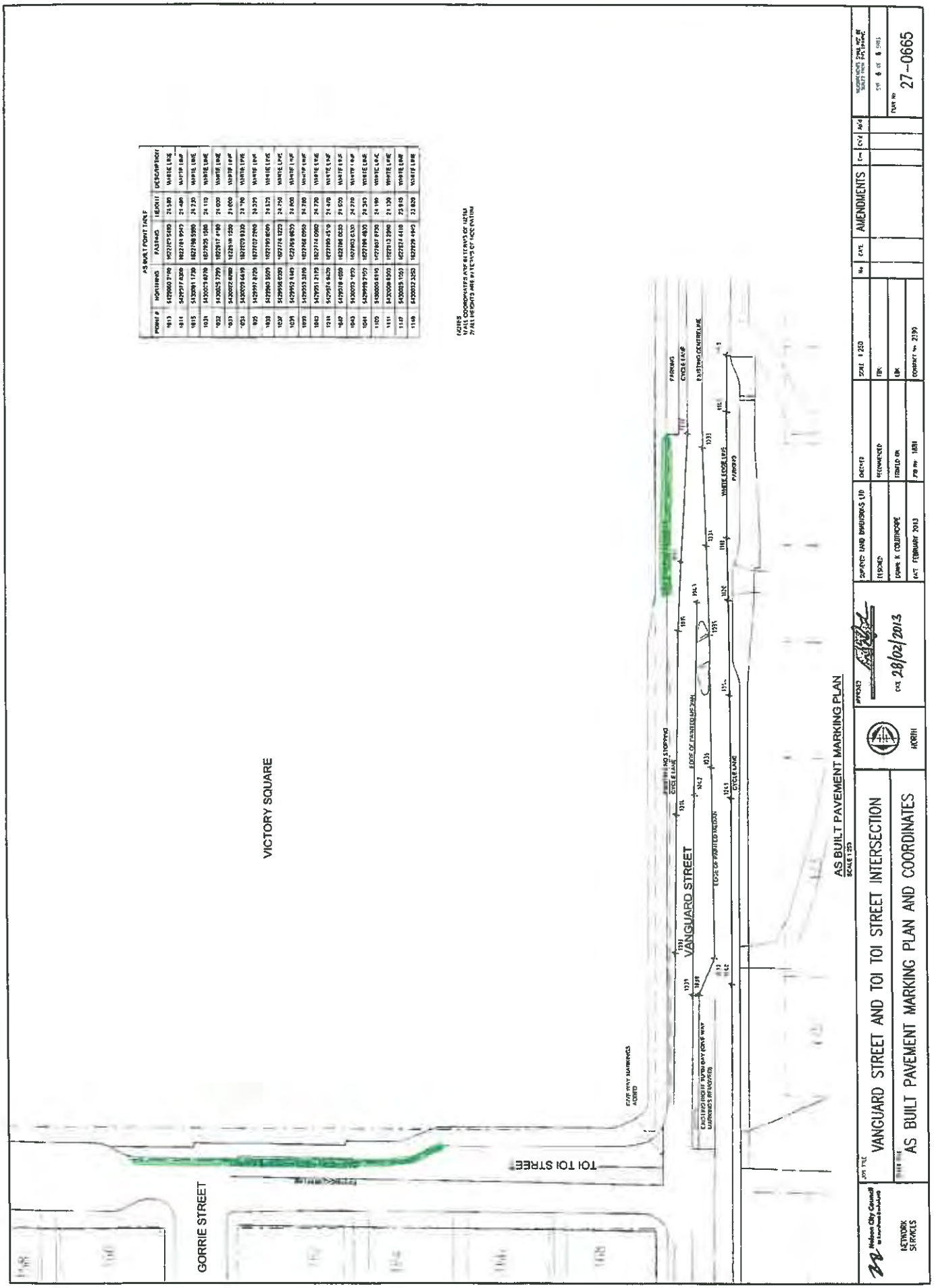

2 new car parks, Rutherford
south of Selwyn


2 new car parks, Rutherford north of Examiner
2 new car parks, Rutherford at approach to Examiner
1 new car park, Rutherford south of Examiner


2 new car parks, Rutherford south of Examiner
2 new car parks adjacent Century Park Motor Lodge


Rutherford Street
2 new car parks, Rutherford adjacent Girls College
30 m

ATTACHMENT 4.



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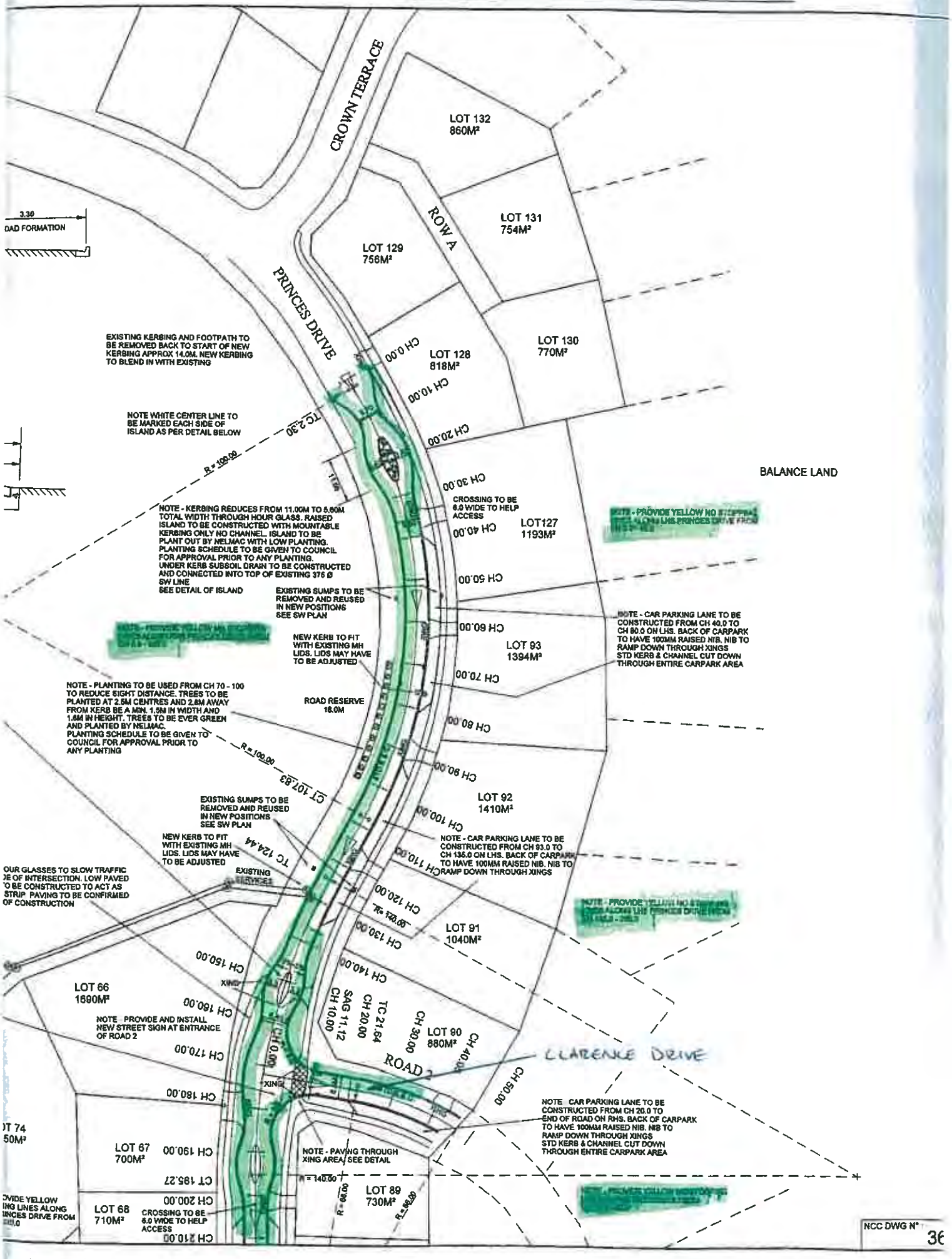
ATTACHMENT 5a PRINCESS DRIVE



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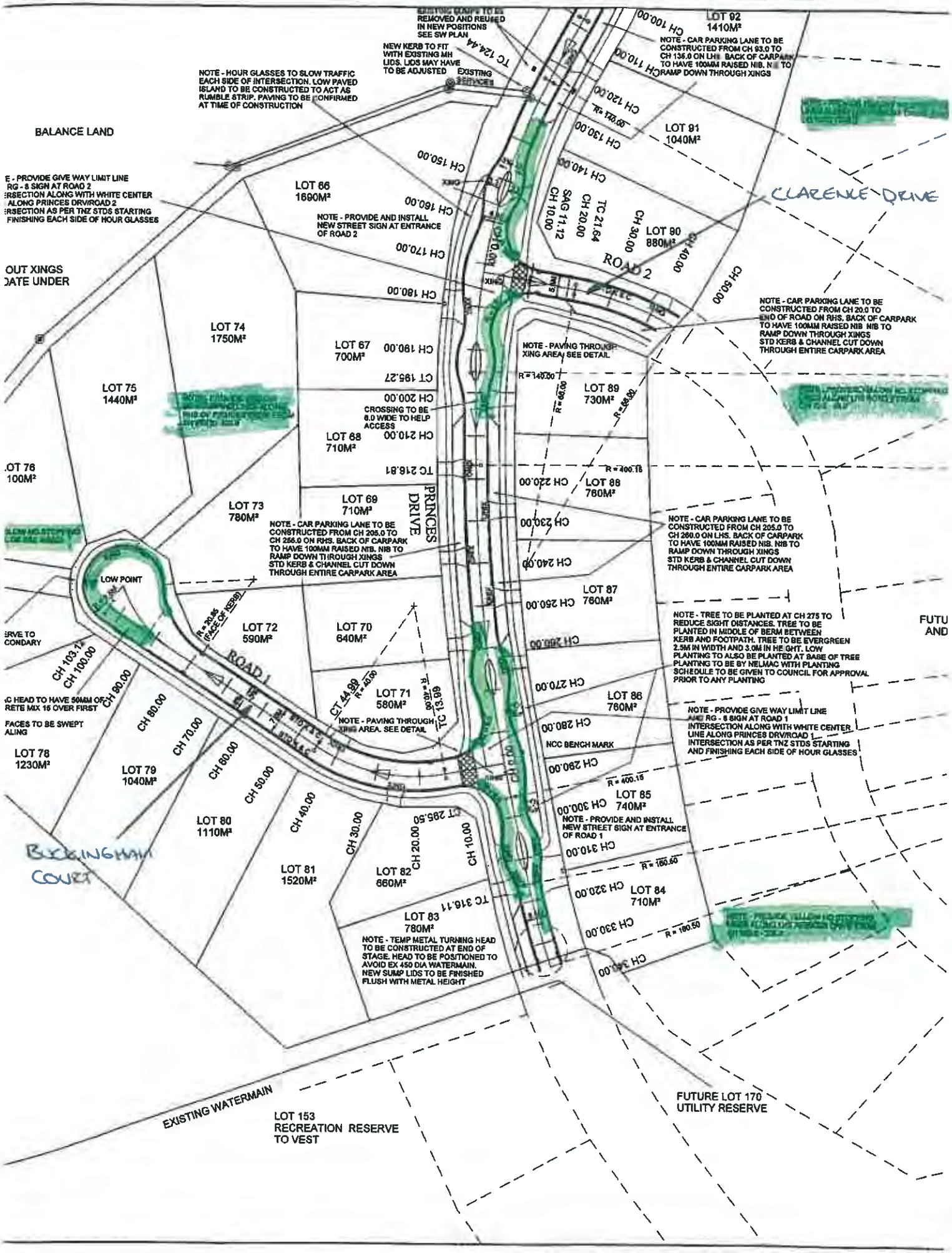
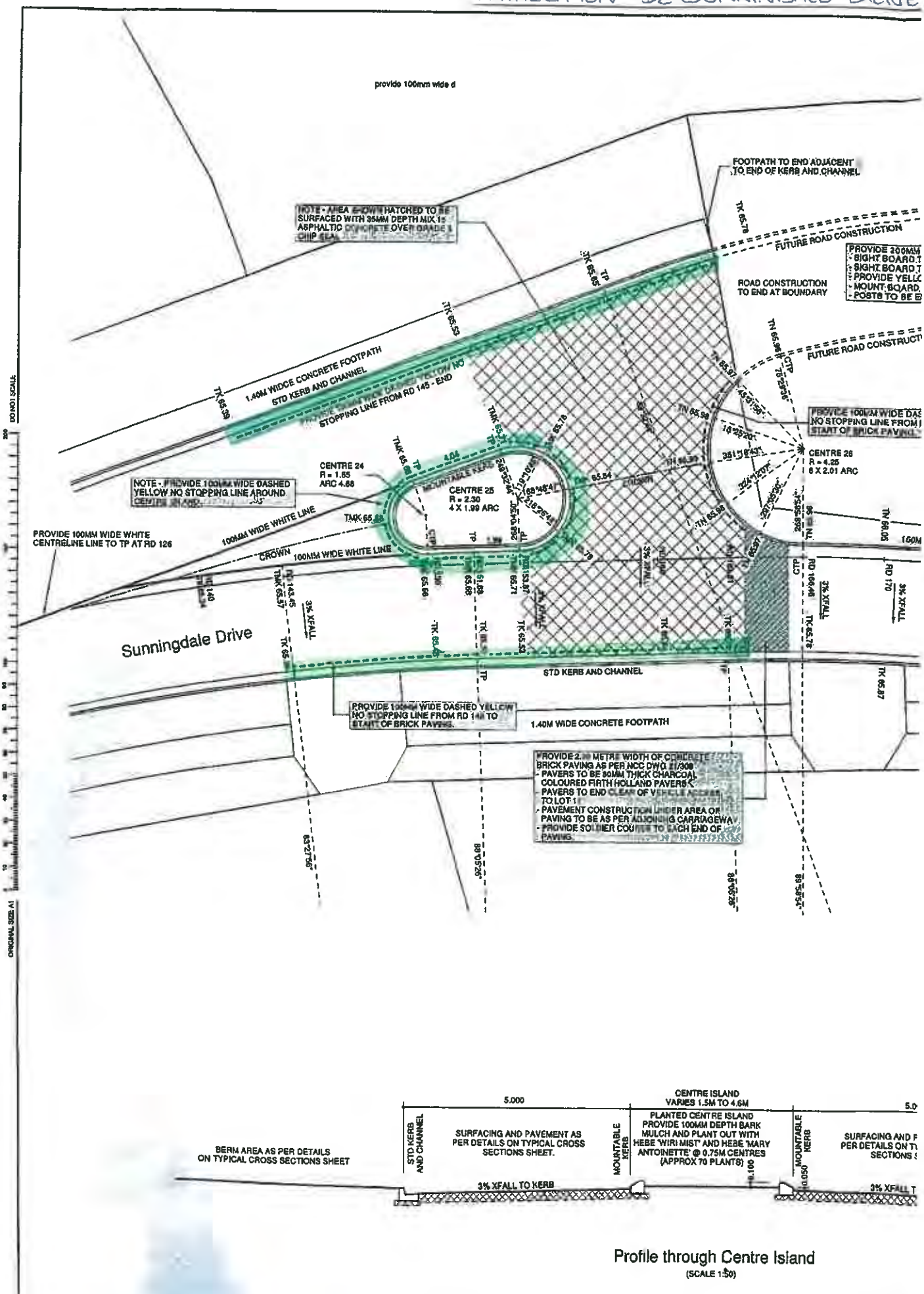
ATTACHMENT 5b PRINCES DRIVE



ATTACHMENT 5c SUNNINGDALE DRIVE



Profile through Centre Island
(SCALE 1:50)

REPORT 1495197

Sugary Carbonated Drinks

1. Purpose of Report

1.1 To consider options related to the sale of sugary carbonated drinks (fizzy drinks) in Council facilities and parks and Council-run events.

2. Recommendation

***THAT** Council develop a policy on the sale of sugary carbonated drinks from Council facilities and parks and Council events;*

OR

***THAT** Council does not develop a policy on the sale of sugary carbonated drinks from Council facilities and parks and Council events.*

3. Background

3.1 Dr Roby Beaglehole, who is a Senior Hospital Dentist at the Nelson Marlborough District Health Board, has asked the Council to consider restricting the distribution of sugary carbonated drinks at its venues and events. He said this would send a positive message about harm reduction, as these drinks are a major contributor to type 2 diabetes, obesity and tooth decay.

4. Discussion

Ministry of Health Information

4.1 Last year the Ministry of Health published 'Food and Nutrition Guidelines for Healthy Children and Young People (Aged 2-18 years): A background paper'. It provides evidence-based technical information and best practice recommendations on nutrition, and includes information about sugary carbonated drinks.

4.2 Attachment 1 to this report summarises some key points of the Ministry of Health document, including a table listing the sugar and energy content of a range of different drinks including fruit juice, energy drinks and sports drinks. For example, a 355 ml can of fizzy drink contains 10 teaspoons of sugar and a 600 ml bottle of fizzy drink contains 17 teaspoons of sugar.

4.3 The Ministry of Health document states there is convincing evidence that sugary drinks are associated with increased body weight and increased risk of obesity and type 2 diabetes. Another concern about all sugary drinks is their contribution to tooth decay.

Sugary Carbonated Drink Sales from Council Facilities, Parks and Events

4.4 Sugary carbonated drinks are sold at a number of Council facilities and parks including: Trafalgar Park, Trafalgar Centre, Montgomery Square Superloo, Tahunanui Motor Camp, Brook Valley Holiday Park, Riverside Pool, and the Waahi Taakaro Golf Course.

4.5 Concessions have been granted to food vendors to sell food and drinks at sports fields including Tahunanui Reserve and Saxton Field (hockey, netball and softball) with no limits regarding sugary carbonated drinks.

4.6 Sugary carbonated drinks are also sold at a number of Council-run events including the Arts Festival, the Masked Parade and Opera in the Park. Licences to sell alcohol generally include a requirement to offer non-alcoholic drinks as well.

4.7 Sugary carbonated drinks are also sold from leased buildings such as the Nelson Yacht Club Restaurant and Melrose Café. In the past the Council has not imposed conditions on the use of leased Council buildings, provided rents are paid and health and safety conditions are met.

The Local Government Act 2002

4.8 Promotion of public health is primarily the role of the Ministry of Health. The Ministry's website states that it is "the Government's principal adviser on health and disability: improving, promoting and protecting the health of all New Zealanders."

4.9 This issue has been brought to the attention of Council because it relates to the operation of Council premises and events. Provision of public services, such as facilities and events, is within the purpose of Local Government Act.

4.10 Restricting the sale of sugary carbonated drinks is not directly related to the provision of public services. However, it could be considered to be relevant to the requirement to provide good quality local public services that are appropriate to present and anticipated future circumstances, such as increasing levels of obesity.

4.11 In terms of cost-effectiveness for businesses, any restrictions have potential to impact on the profits made by swimming pool, golf club and campground operators, as well as food vendors and event organisers.

Council Policies

4.12 Restricting the sale of sugary carbonated drinks is compatible with the Council's Social Wellbeing Policy (page 2), which states that the Council's social wellbeing role includes:

- Leading by example - looking at Council activities through a social wellbeing 'lens' to improve social wellbeing outcomes for the community;
- Partnering, collaborating and facilitating – with central government, community organisations and other stakeholders to target initiatives effectively;
- Advocacy – at regional and national levels.

4.13 The Social Wellbeing Policy was developed prior to the changes to the Local Government Act, and the removal of social wellbeing from the purpose. However, Council is still required to take the social interests of people and communities into account, in accordance with section 14, clause (h) of the Local Government Act 2002.

Options

4.14 Options for the sale of sugary carbonated drinks from Council facilities, parks and events include:

- Do nothing – do not change the current approach of leaving it to vendors to decide what drinks they sell.
- Voluntary approach – provide the Ministry of Health information and ask vendors to consider not selling sugary carbonated drinks.
- Limited scale approach – change contents of vending machines at Council facilities, make it a condition of concessions not to sell sugary carbonated drinks, and change the range of drinks provided at Council-run events.
- Full scale approach – make it a condition of leases for all Council-owned facilities, for example Nelson Yacht Club Restaurant, Melrose Café, Tahunanui Beach Camp Store.

Analysis of options

Option	Advantages	Disadvantages
Do nothing	Recognises the limited role Council has in health promotion.	Ongoing sale of sugary carbonated drinks from Council facilities, parks and events.
Voluntary approach	Some vendors may change the types of drinks they sell.	Time involved in developing the policy and communicating it. Potential for limited uptake.

Option	Advantages	Disadvantages
Limited scale approach	Some reduction in the carbonated sugary drinks sold from Council facilities, parks and events.	Costs and time to make the changes. Potential financial impacts for vendors who benefit from drink sales. Potential for opposition from vendors.
Full scale approach	Greater reduction in outlets at which sugary carbonated drinks are sold.	The cost of making legal changes to lease agreements. Potential for opposition from lessees.

5. Implementation

5.1 As shown in the Table in Attachment 1, a range of beverages including fruit juice, flavoured milk, energy drinks and sports drinks all include sugar. For this reason, it may be difficult for Council to justify selling some of these drinks and not others.

5.2 If the Council decides to reduce the sale of sugary carbonated drinks, a Council-wide policy should be developed to ensure a consistent approach is taken to Council facilities, parks and events.

5.3 If a limited scale approach was taken, Council would need to progressively phase in this requirement for new concessions and operations that Council runs itself, as well as for vendors such as Mr Whippy, and for vending machines in facilities.

5.4 If a full scale approach is taken, changes to leases would need to be negotiated with the lessees for various facilities including the Nelson Yacht Club Restaurant, Melrose Café, and the Tahunanui Beach Camp Store.

5.5 A communication plan would need to be developed, to ensure all stakeholders are aware of the proposed policy and have opportunity for input. Development of a policy would be an opportunity to set criteria for the types of drinks which should be restricted, and to identify what healthier alternatives are available.

6. Conclusion

6.1 The Ministry of Health's Food and Nutrition Guidelines state there is convincing evidence that sugary drinks are associated with health risks. It is not a core Council role to reduce uptake of these drinks, but the Council does have the opportunity to influence sale of sugary carbonated drinks from its facilities, parks and events if it wishes to do so.

Debra Bradley
Planning Adviser

Attachments

Attachment 1: Extracts from: 'Food and Nutrition Guidelines for Healthy Children and Young People (Aged 2 – 18 years): A background paper' 1495057

Supporting information follows.

Supporting Information

1. Fit with Purpose of Local Government

This issue is not directly related to the purpose of Local Government.

2. Fit with Community Outcomes and Council Priorities

Kind, Healthy People – we are part of a welcoming, safe, inclusive and healthy community.

Good Leadership – our leaders are proactive, innovative, and inclusive "... and act to improve the big issues facing our community".

3. Fit with Strategic Documents

Consideration of this issue is relevant to the Social Wellbeing Policy. Health is specifically mentioned in the vision statement (page 2):

"The Council's vision for this policy is that Nelson has a happy, healthy community where people have access to necessary services and facilities and feel connected to each other and to the city."

4. Sustainability

Reducing the sale of sugary carbonated drinks has potential to contribute to the health of the local community.

5. Consistency with other Council policies

Not applicable.

6. Long Term Plan/Annual Plan reference and financial impact

Not applicable.

7. Decision-making significance

This is not a significant decision in terms of the Council's Significance Policy.

8. Consultation

A communication plan will be developed if the Council decides to develop a policy related to the sale of sugary carbonated drinks from Council facilities, parks and events.

9. Inclusion of Māori in the decision making process

Maori have not been consulted in the preparation of this report, but the views of iwi/Maori could be sought if a policy is developed in future, and if this is identified as an issue of interest to Maori.

10. Delegation register reference

This is a decision of Council.

ATTACHMENT ONE

Information from the Ministry of Health publication: Food and Nutrition Guidelines for Healthy Children and Young People (Aged 2–18 years): A background paper Published online: 06 August 2012

Introduction (page 4)

Food and nutrition for children and young people

Establishing good nutrition and physical activity patterns in childhood contributes to good health throughout life. The values, habits and behaviours developed during this period often influence behaviours in adulthood. In addition there is emerging evidence that health during childhood and adolescence impacts on health during adulthood.

Part 5: Fluids (From pages 76 – 79)

Table 34: Average sugar and energy levels in fruit juice, flavoured milk, sugary drinks and sports drinks

Type of drink	Serve	Sugar Grams per 100 ml	Sugar Grams per serve	Tsp per serve (4g)	Energy (KJ) Per 100ml	Energy (KJ) Per serve
Fruit juice	Glass (250 ml)	10	25	6	180	400
Flavoured milk	Glass (250 ml)	10	25	6	313	783
Powdered fruit drink	Glass (250 ml)	8	20	5	140	350
Cordial	Glass (250 ml)	8	20	5	140	350
Fizzy drink	Can (355 ml) Bottle (600 ml)	11 11	39 66	10 17	180 180	640 1080
Energy drink	Can (250 ml) Bottle (600 ml)	10 10	25 60	6 15	190 190	480 1140
Sports drink	Bottle (750 ml)	8	60	15	140	1050
Flavoured waters	Bottle (700 ml)	3	21	5	50	350

Health impacts

There is now convincing evidence that sugary drinks are associated with increased body weight and increased risk of obesity and type 2 diabetes mellitus (Malik et al 2006; Vartanian et al 2007; Gibson 2008). Furthermore, experimental studies show that reducing intakes of sugary drinks improves these health outcomes (Vartanian et al 2007). The World Cancer Research Fund also concluded that there is convincing evidence that sugary drinks are associated with weight gain and obesity, both of which are risk factors for many cancers (World Cancer Research Fund and American Institute for Cancer Research 2007). The main reason sugary drinks contribute to weight gain is thought to be that they do not induce satiety to the same extent as solid food (Wolf et al 2007). As a result, people do not reduce their intake of solid food to compensate for the extra energy (kJ) consumed as sugary drinks, which can lead to weight gain (Bellisle and

Drewnowski 2007). Sugary drinks may also be consumed in higher volumes compared with water, because less fluid is absorbed from sugary drinks (Manz 2007).

Another concern about all types of sugary drinks is that they contribute to dental caries by providing a sugar substrate that is fermented by bacteria to produce acid, which in turn promotes tooth erosion. In addition, many sugary drinks are acidic, which causes tooth erosion independently of dental caries (for more information on both these issues, see section 13.2: Oral health). Many sugary drinks also contain artificial food colours (see section 13.6: Food additives) and some contain caffeine (see section 13.8: Caffeine). A kola-type drink contains around 33 mg caffeine per 355 ml can, compared with 55 mg of caffeine in 250 ml of instant coffee/tea.

Diet drinks

Diet drinks are not recommended for children and young people. However, in recognition that New Zealanders do drink fizzy/soft drinks, a diet fizzy/soft drink would be a better choice than a sugary fizzy/soft drink because it provides less energy (kJ) and does not contribute directly to dental caries. Note that diet drinks tend to be acidic, and can contribute to tooth erosion. If consumed, diet drinks should be consumed only occasionally, in small quantities, and with food rather than between meals.

Diet drinks are sweetened with intense sweeteners so provide little or no energy (kJ) (see section 13.7: Intense sweeteners). Theoretically the use of diet drinks should assist with weight control, but there is limited evidence to support this outcome. A small number of diet drinks contain the intense sweetener cyclamate. A dietary modelling study showed that children and young people who consume these drinks in high amounts were at risk of exceeding the acceptable daily intake (ADI) for cyclamate (FSANZ 2004). However, the maximum level of cyclamate permitted in drinks has been lowered since this study was undertaken, making it less likely for consumers to exceed the ADI (see section 13.7: Intense sweeteners).

Another concern about diet drinks is that they maintain a taste for sweetness, so consumers of diet drinks may find healthy foods that are less sweet unpalatable, which could reduce diet quality (Ludwig 2009). Many diet drinks also contain artificial food colours (see section 13.6: Food additives) and some contain caffeine (see section 13.8: Caffeine). A diet kola-type drink contains around 49 mg of caffeine per 350 ml glass, compared with 55 mg of caffeine in 250 ml of instant coffee/tea.