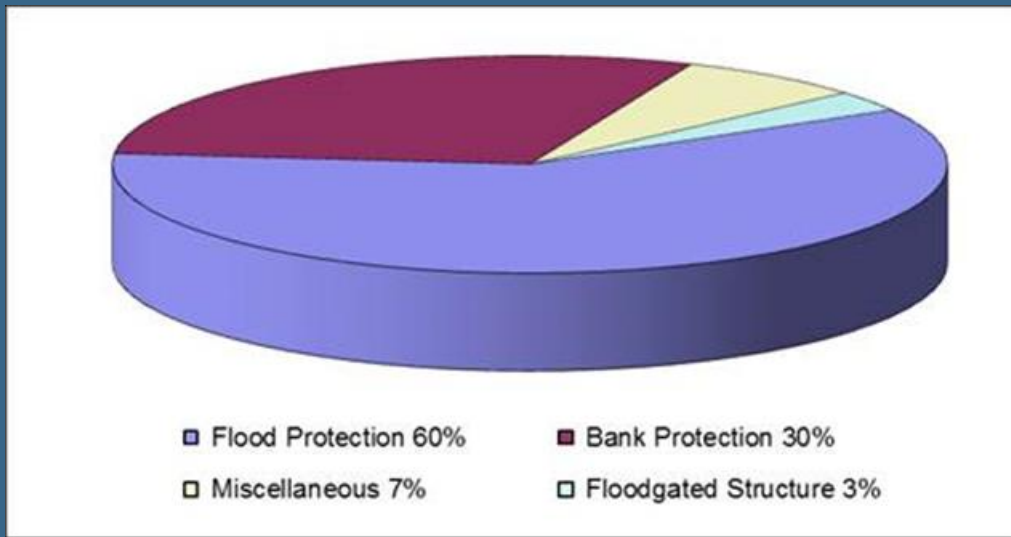


Lower Whanganui Scheme

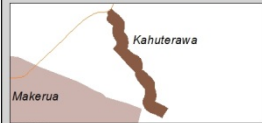
- Provides flood protection (FP) to Balgownie and Kowhai Park/ Anzac Parade areas of Whanganui;
- Accordingly operational focus is solely relating to the provision of FP ie:
 - inspecting and maintaining FP assets (stopbanks/ floodwalls);
 - undertaking erosion protection works necessary to provide flood protection eg where river bank erosion threatens the integrity of a section of stopbank;
 - monitoring channel capacity.

Lower Whanganui Scheme

- Established in 2008;
- Maintains assets valued at \$5.2M;



Scheme name	Infrastructural assets employed
Akitio	No
Ashhurst	Yes
Eastern Manawatu	No
Forest Road	Yes
Foxton East	Yes
Haunui	Yes
Himatangi	Yes
Hokio	Yes
Ihuraia	No
Kahuterawa	No
Koputaroa	Yes
Lower KIWITEA	Yes
Lower Manawatu	Yes
Lower Whanganui	Yes
Makerua	Yes
Makirikiri	Yes
Manawatu	Yes
Mangatainoka	Yes
Matarawa	Yes
Moutoa	Yes
Ohau Manakau	Yes
Pakihī Valley	Yes
Pohangina Oroua	Yes
Porewa Valley	Yes
Rangitikei	Yes
South East Ruahine	Yes
Taringamotu	No
Tawataia Mangaone	Yes
Te Kāwau	Yes
Turakina	No
Tutaenui	Yes
Upper Manawatu	Yes
Upper Whanganui	Yes
Whangāehu Mangawhero	No
Whirokino	Yes



OT2355



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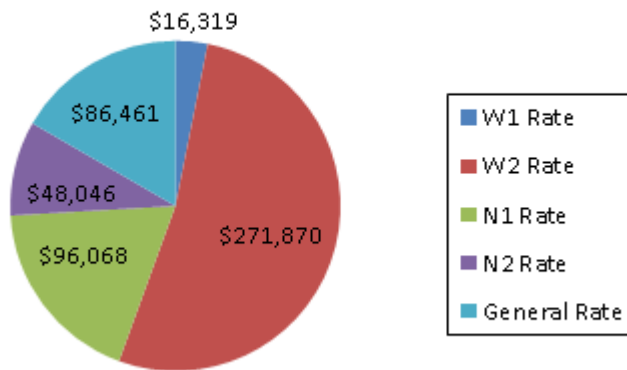
All river and drainage scheme boundaries

Prepared for Operations
By Catchment Information 20 Nov 2014
Contains Crown Copyright Data
Cinet OT2355

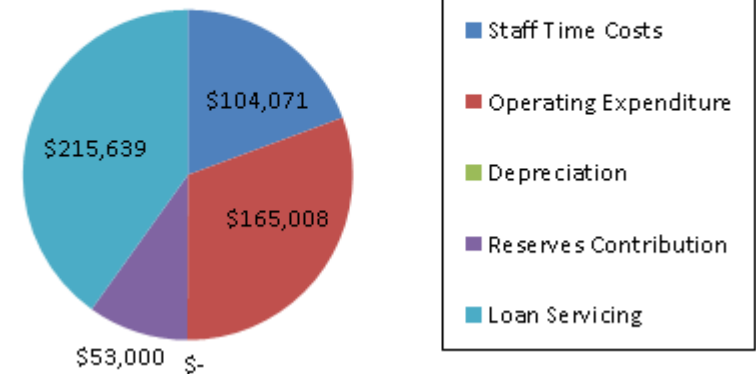


Scheme Income and Expenditure

Scheme Income 2016/17 FY



Scheme Expenditure 2016/17 FY



SCHEME RATING MAP

LOWER WHANGANUI

Plan No.
4751/3
Lower Whanganui Plan 4751/1, 4751/2, 4751/3
Map 1 of 1 maps





DESCRIPTION:
2022 Lower Whanganui INDIRECT (UAC)
N2 auto calculated by HRC
All VNZs in the Whanganui district (is_code = 37)
excluding roll numbers 13080 to 13280 inclusive

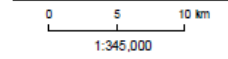
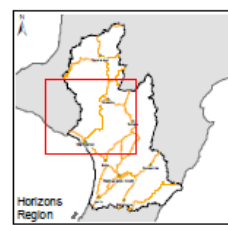
2023 Lower Whanganui INDIRECT (CV)
N1 auto calculated by HRC
Rolls numbers 13080 to 13280 inclusive

REFERENCE:
n/a

CREATED BY:
N.Batchelor, Catchment Information
9 Nov 2011

APPROVED BY:
n/a

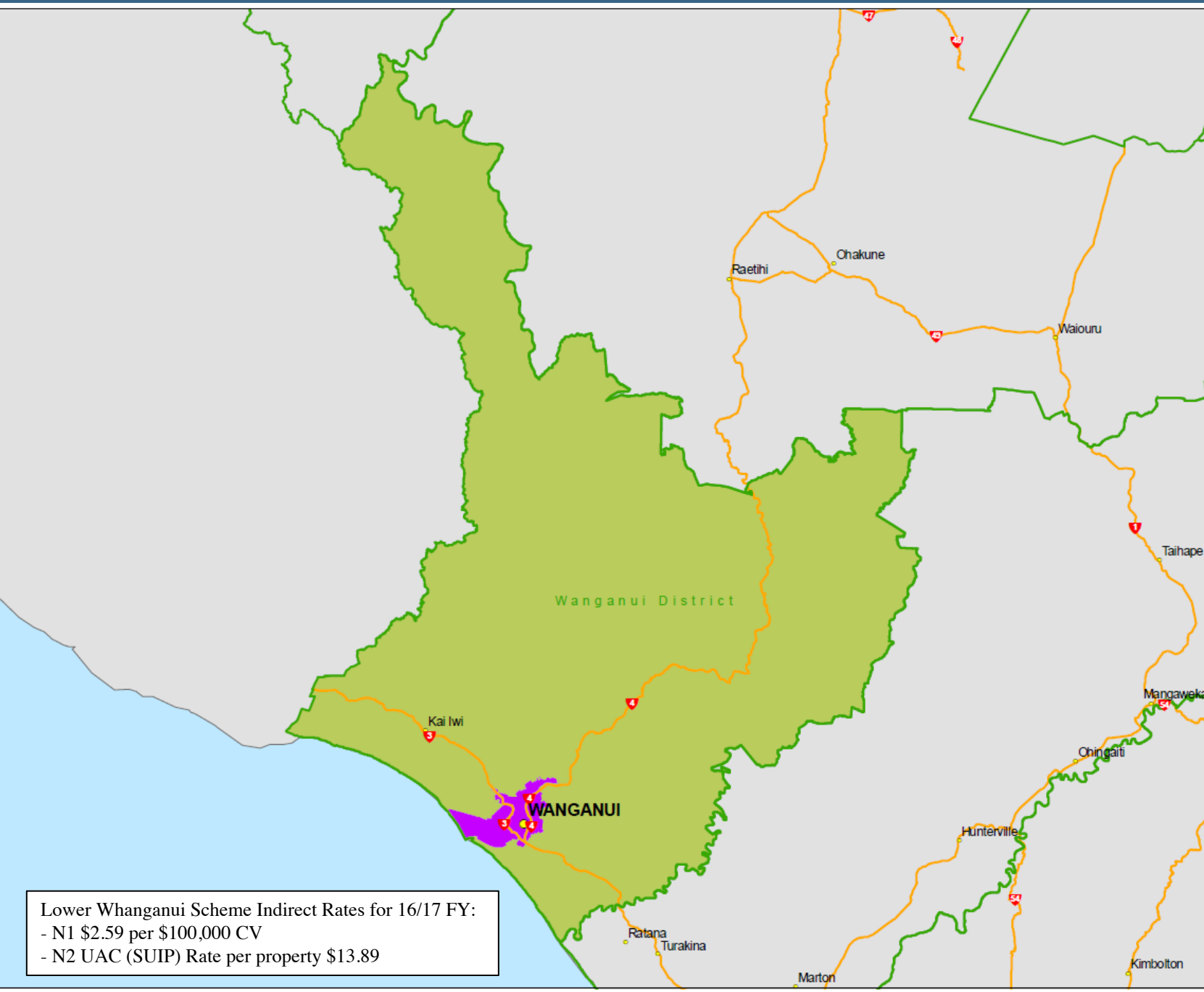
-  Highway
-  TLA
- 2022 INDIRECT (CV)**
-  N1
- 2023 INDIRECT (UAC)**
-  N2



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Lower Whanganui Scheme Indirect Rates for 16/17 FY:
- N1 \$2.59 per \$100,000 CV
- N2 UAC (SUIP) Rate per property \$13.89

LOWER WANGANUI

Plan No.
4751/1
Lower Wanganui Plans 4751/1, 4751/2, 4751/3
Map 1 of 1 maps

2021 DIRECT

DESCRIPTION:
2021 Lower Wanganui DIRECT (CV).
W1 = selected valuations only
W2 auto calculated by HRC
Roll numbers 13260 to 13260 (inclusive) but
not including differential W1

PREPARED BY:
N.Batchelor, Catchment Information, 30 Jun 2011

AMENDMENT 1:
Desc: Anzac Parade properties taken from W2
and added to W1.
Ref: 075237
Appt: Peter Blackwood, Operations, 05 June 2014
Updated: N. Batchelor, CI, 05 June 2014

Legend

- W1 (High Benefit)
- W2 (Med Benefit)



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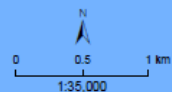


Direct Rate per \$100,000 CV per year for 16/17 FY



WANGANUI CITY

Whanganui River



Depreciation

- Under the Local Government Act Councils are obligated to set aside funding for the cost of replacing an asset (referred to as depreciation) when it reaches the end of its life;
- Although the Scheme has depreciable assets (assets that have a finite life), Council policy exempts the need to set aside such funds where debt is being repaid;
- Given the relatively long debt repayment timeframes this will translate to future (albeit relatively modest) capital expenditure over and above current/ projected expenditure levels;
- Note that stopbanks are not depreciable (their performance does not reduce over time).

Current Levels of Service

- Four 'compartments' to river-related Whanganui flooding:
 - Balgownie. Protected to a 200 year RP standard;
 - Kowhai Park/ Anzac Parade: Protected to a 30 year RP standard with no freeboard;
 - Taupo Quay/ CBD eastern end. Not protected;
 - Putiki. Not protected.
- No provision for any further increase in flood protection standards for Whanganui in Council's current 30 year Infrastructure Strategy.

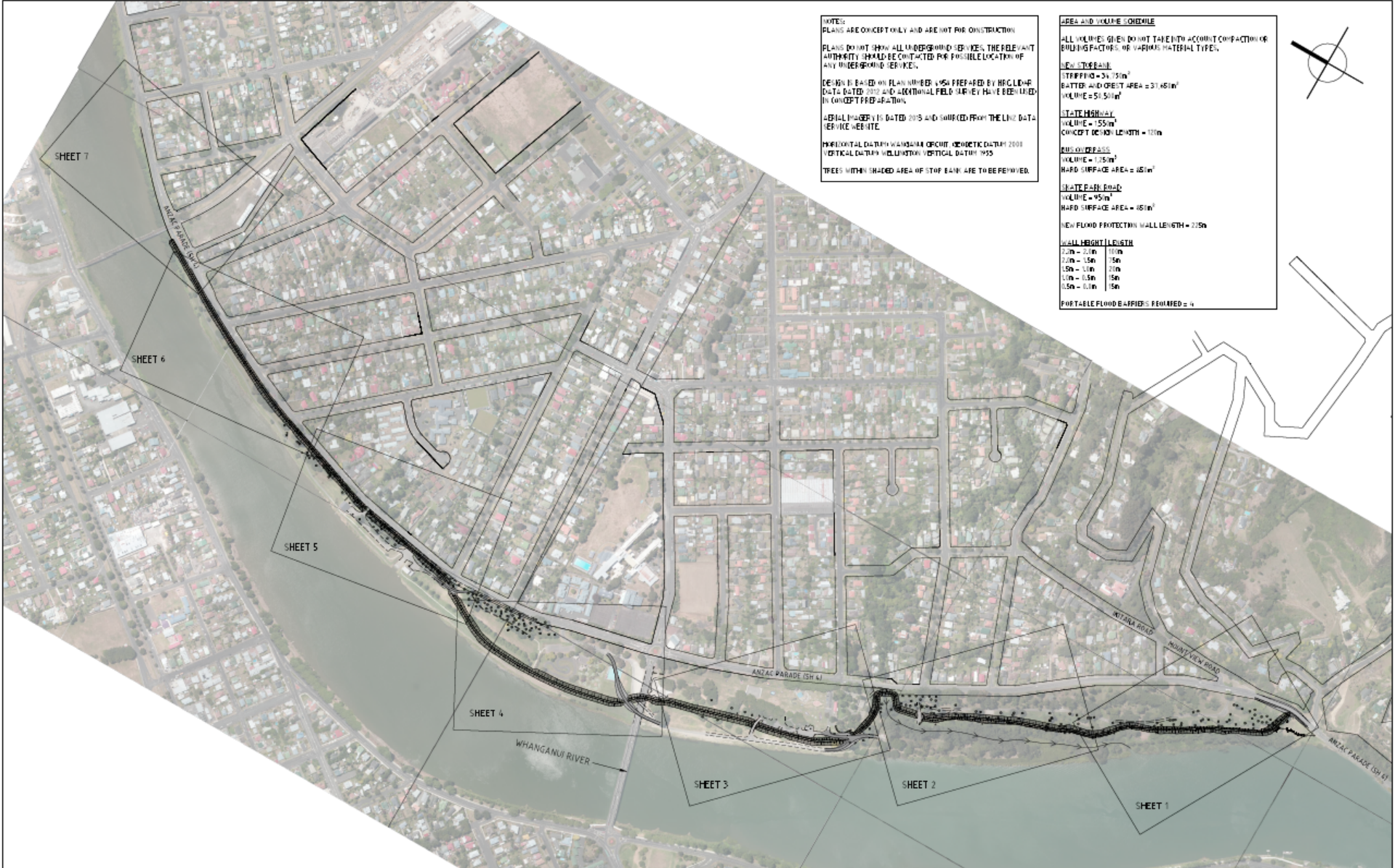
Balgownie Flood Hazard

- 3.1 km of stopbanking providing a 200 year Return Period standard of flood protection to 60 hectares of predominantly commercial/ industrial land;
- Completed in 2011 costing \$3.2M;
- Loan balance current standing at \$2M and scheduled to be repaid by the end of 2029.



Anzac Parade Flood Hazard

- Existing stopbank passed to Horizons in 2008;
- Cost of achieving 200 year RP protection standard (2.5km of stopbank) estimated in 2011 at \$4.05M;
- Council resolved not to include in 2012-22 Long Term Plan;
- Subsequent decision made to upgrade stopbank to 30 year RP standard, work completed in 2014 at a cost of just over \$1M;
- No provision in Horizons' current 30 year Infrastructure Strategy.



NOTES:
 PLANS ARE CONCEPT ONLY AND ARE NOT FOR CONSTRUCTION
 PLANS DO NOT SHOW ALL UNDERGROUND SERVICES, THE RELEVANT AUTHORITY SHOULD BE CONTACTED FOR POSSIBLE LOCATION OF ANY UNDERGROUND SERVICES.
 DESIGN IS BASED ON PLAN NUMBER 1950 PREPARED BY HCC LEVING DATA DATED 2010 AND ADDITIONAL FIELD SURVEY HAVE BEEN USED IN CONCEPT PREPARATION.
 SERIAL IMAGES 1 TO DATED 2015 AND SUNKED FROM THE LIDAR DATA SERVICE WEBSITE.
 HORIZONTAL DATUM: WANGANUI ORIGIN, GEODETIC DATUM: 2000
 VERTICAL DATUM: WILSONTON VERTICAL DATUM 1955
 TREES WITHIN SHADDED AREA OF STOP BANK ARE TO BE REVIEWED.

AREA AND VOLUME SCHEDULE
 ALL VOLUMES GIVEN DO NOT TAKE INTO ACCOUNT COMPACTION OR BUILDING FACTORS, OR VARIOUS MATERIAL TYPES.
NEW STOP BANK
 STRIPPED = 34,750m³
 BATTER AND GROUT AREA = 37,450m³
 VOLUME = 51,500m³
STATE HIGHWAY
 VOLUME = 1550m³
 CONCEPT DESIGN LENGTH = 100m
NEW CURB PAVES
 VOLUME = 1,250m³
 HARD SURFACE AREA = 450m²
STATE BANK ROAD
 VOLUME = 450m³
 HARD SURFACE AREA = 450m²
 NEW FLOOD PROTECTION WALL LENGTH = 2750m
WALL HEIGHT | LENGTH

2.0m - 2.00m	100m
2.0m - 1.50m	750m
1.50m - 1.00m	270m
1.00m - 0.50m	150m
0.50m - 0.00m	150m

 PORTABLE FLOOD BARRIERS REQUIRED = 4