

## Chapter Four

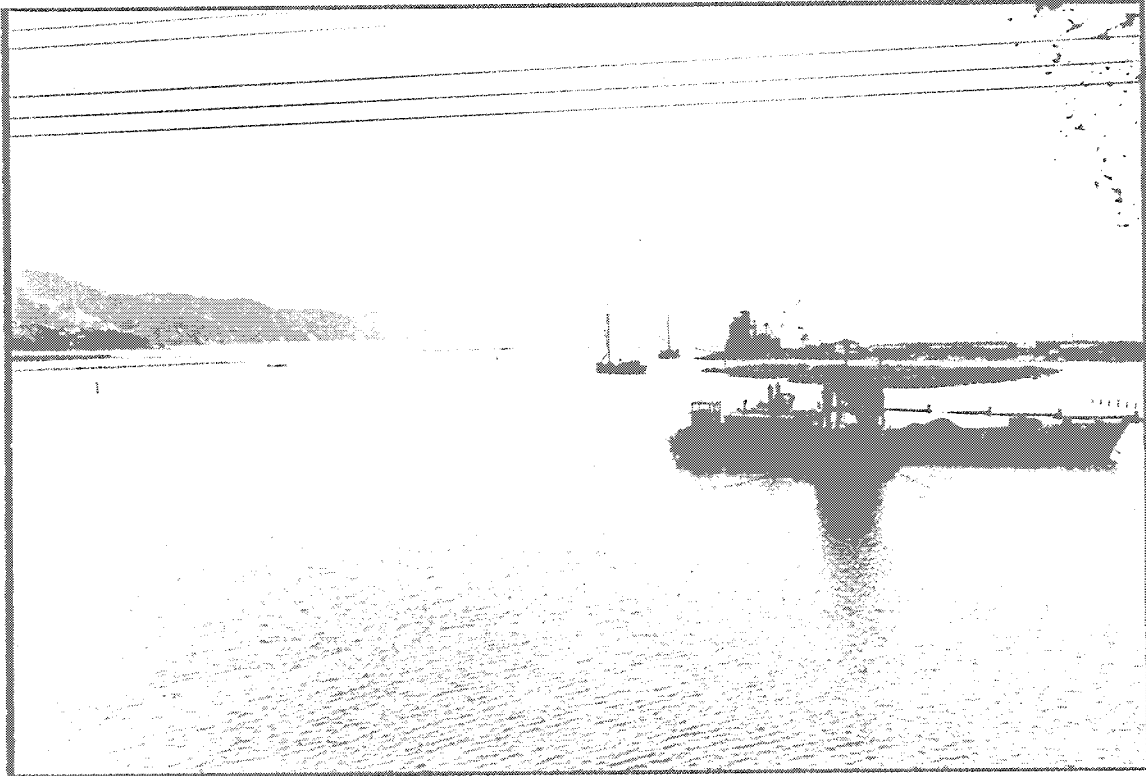
# THE EXPLOITATION OF THE SHINGLE RESOURCE

## 1900-1990

Between 1900 and 1990 private companies and Government and local authority contractors removed more than 4 million cubic meters of shingle and sand from the bed of the Hutt River. Most of this material was taken from the reach downstream of Taita Gorge and led to the lowering of the riverbed from a riverbed which was almost level with the adjoining floodplain to the incised channel we see today.

The 1974 requirements to modify plants to maintain minimum water quality standards forced the closure of most of the small operators. Many of these companies were operated by rugged individuals who had worked the shingle resource for over 50 years. The sole remaining company has had many name and shareholding changes but has been continuously involved in extraction operations since 1904. This followed a successful tender for the right to work the Melling Beach (then Kingdon's Beach, opposite what is now the Lower Hutt City Council northern riverside car park).

The sale of shingle provided funding for the management of the River from 1924 to the mid-1970s. The lowering of the bed led to a substantial increase in the flood carrying capacity of the central channel. Without shingle sales to the Wellington market it is likely that the flood control scheme would have failed through overtopping in both the 1931 and 1939 floods. Without "selective extraction", the process of extracting only those deposits likely to lead to channel misalignment, the cost of maintaining and establishing the central channel would have been many times greater.



**Plate 36: Extraction at the Estuary, 1929.** Source: Alexander Turnbull Library, S C Smith col., neg. G49107



**Plate 37: Shingle filling of the First Reclamation, c. 1934.** Source: Alexander Turnbull Library, neg. F122250

## Dredging the River

The original design report presented by Laing-Meason to the Hutt River Board in 1900 contained reference to a proposal to achieve flood control by dredging the central channel. The construction of embankments was favoured over a dredging option, however, calculations and notations on the original embankment design plans make reference to dredging. It is not clear if Laing-Meason planned on dredging the central channel to increase the channel capacity so that the design flood could be safely passed. This would have been required if the design flood was the maximum likely flood referred to in the Hutt River board's Minute papers.

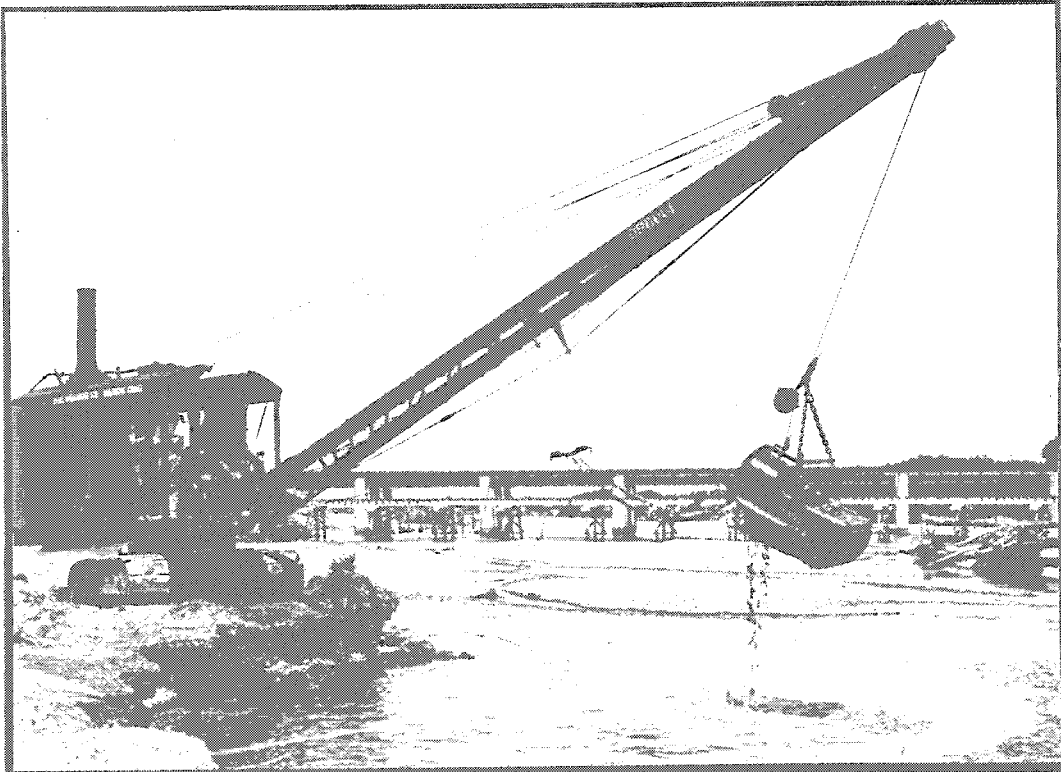
The control of mining activities to achieve river control objectives was of considerable importance to Laing-Meason and he encouraged the selective extraction of troublesome shingle deposits. During the 1901-1903 stopbank construction period there was a temporary ban placed on extraction to ensure that the most suitable gravels were kept close at hand for use as bulk filling in the stopbank foundations and stopbank core.

From the earliest days of settlement there was commercial interest in the shingle resource, although the volume of demand was at first low and was substantially below the rate of bed load delivery. The extracted volumes did not match the natural rate of supply or permit the lowering or repositioning of the bed until 1924 when the "dragline" system of mining was adopted.

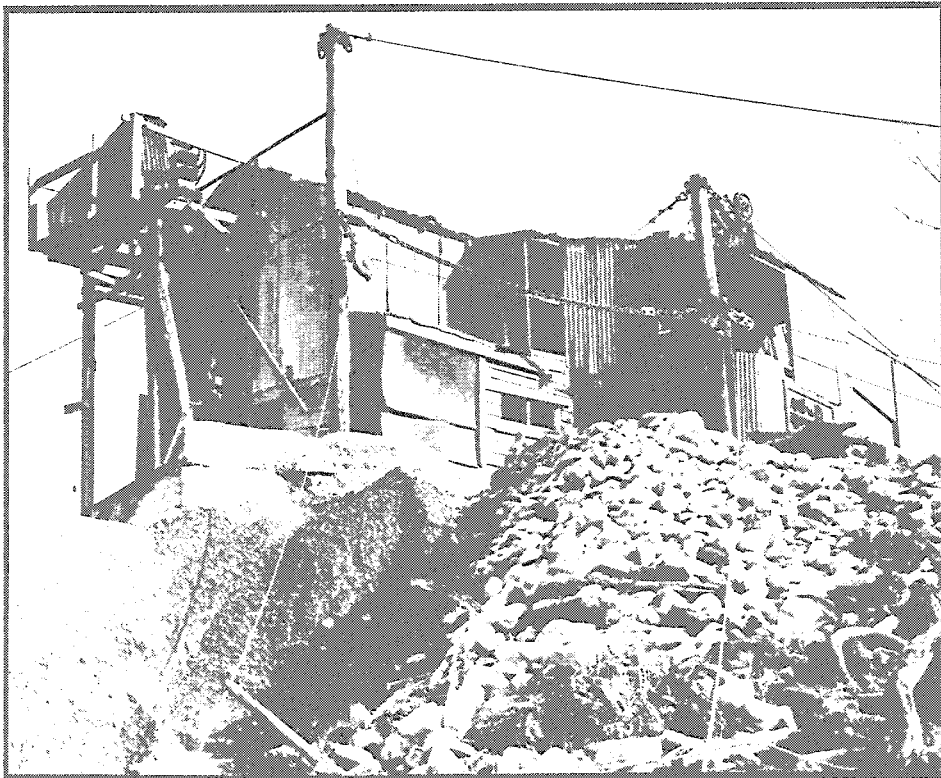
Between 1906 and 1924 attempts to extract and market the shingle resource almost bankrupted the Hutt River Board and during the period 1915-1924 the "Shingle Business" dominated Board affairs. Large-scale commercial extraction began in 1902 with the agreement between New Zealand Railways and the Hutt River Board for the establishment of a ballast mining operation at Melling. The agreement permitted other contractors to use the siding, although New Zealand Railways was the largest single extractor until 1920, removing 10,000 to 20,000 cubic metres per year. Licensed extraction from other areas also commenced in 1902, managed in a similar way to the Wellington Regional Council's current operations. This continued until a tendering system was introduced in 1904 whereby bids were called for the right to extract from five specific "beaches" (refer to figure 12, p. 80).

The tendering system for allocating rights to the resource was used until 1916, however, it failed to achieve the desired rate of extraction and in particular the removal of the "problem" deposits left after each large flood. Misalignment problems caused by these deposits, combined with unacceptable bids for some areas in the 1912 round of bidding, left the Board with the responsibility of managing three of the extraction areas from 1912.

The flood of 1915 finally caused the abandonment of the tendering system. April 1916 saw the Board advertise its intention to take over the entire resource management and marketing and call for commission agents in the Wellington City area. It called and accepted unit rate tenders to load and cart shingle to the Hutt Station railway siding. Cartage to Wellington by motor lorry was also permitted and paid for at the same rate as rail cartage.



**Plate 38: Extraction for Ava Rail Bridge (by dragline), c. 1925.** Source: Alexander Turnbull Library, Evening Post col. neg. G EP728



**Plate 39: Bognuda, Adams and Blyth crusher erected upstream of Ewen Bridge 1930, photo 1958.** Source: Alexander Turnbull Library, Evening Post col. neg. C11329.

Archive Table 9, p. 74, contains extracts from the Board Minute papers which illustrate the difficulty the Board experienced with the shingle business during the 1900 to 1917 period.

## **Mechanisation of the Industry**

By 1919 the Board was seeking ways to mechanise the extraction operations. Survey records indicate that the bed level was dropping slowly (600 mm between 1902 and 1915) but the minute papers still record dissatisfaction with the rate of extraction. It is unclear if the desire to increase the rate of extraction was in response to an increased demand for shingle or was required for channel management reasons.

Advice on the appropriate machinery was sought from Mr Marchant, the Wellington Harbour Board Engineer. Consequent to this advice the chairman and his overseer set about investigating the purchase of a floating suction dredge, as used in the South Island goldfields. In 1920 a £9,000 loan was raised to purchase a second hand floating dredge, a new suction pump, and a crusher and associated machinery. Laing-Meason was appointed to provide plans for the location of the machinery. The components were to be assembled on the river berm in the area of the Melling siding.

Difficulties in assembling the dredge, with claims that parts had been stolen or misplaced, resulted in the appointment of Laing-Meason to supervise and control the dredging enterprise. His initial report estimated the project would go £4500 over budget, the last straw for ratepayers who had watched with alarm the attempts to assemble the machinery. The 1920 loan poll to raise the additional monies to complete the dredge was defeated. In January of the following year the Board members, who had almost single handedly run the Board and its operations since 1915, were voted out of power. These highly motivated, possibly egocentric, men were replaced by a more conservative team who called a halt to the dredge construction and commissioned Laing-Meason to review the shingle operation. Acting on this advice a ratepayers meeting was held in which it was resolved to sell the dredge and to market the gravels by way of a royalty charged on material won from licensed areas.

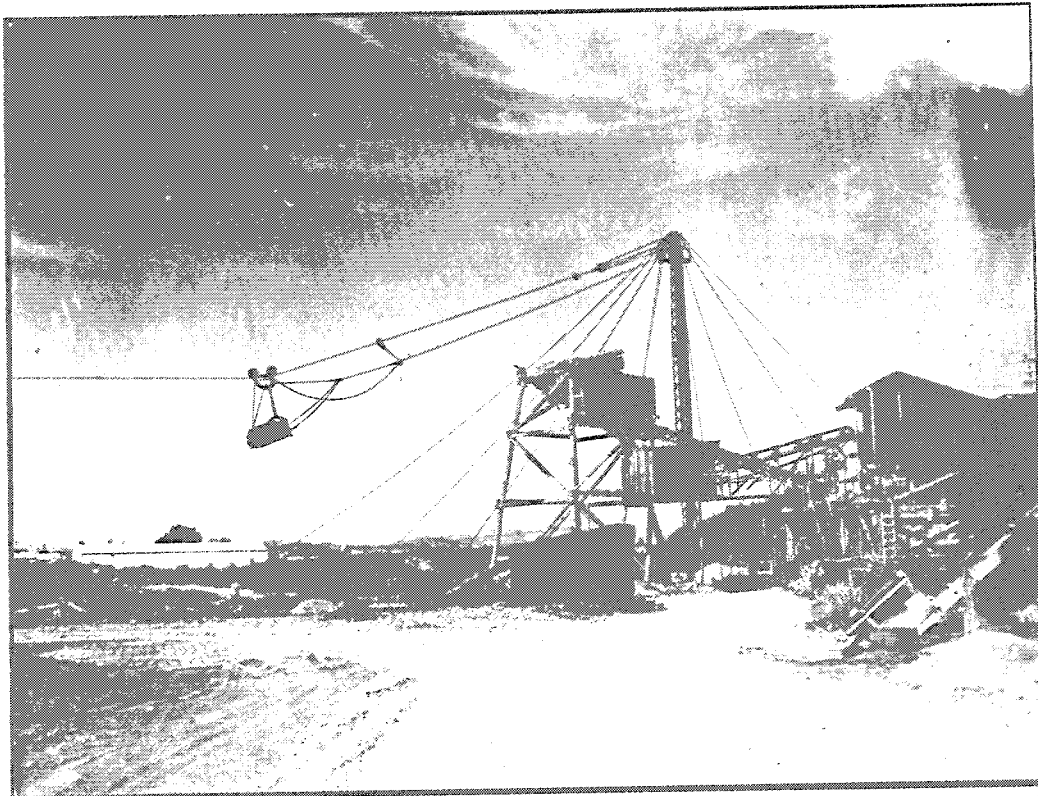
A dragline based shingle business was soon established at Melling. The Hutt Shingle Company (previously Pitcaithley's and eventually to become River Shingle and Sand/Firths/Winstone Aggregates) won the initial three year lease and has continued to operate in this and the adjoining Belmont areas to the present time.

Although the ownership of the original dragline equipment is not recorded, the Hutt River Board may have been a major shareholder as it appears that it was a Board decision to adopt this method of extraction following the inspection of a grab dredge operating at Patea. Within 10 years, privately owned draglines were operating throughout the Lower Valley and were responsible for the enormous volumes of material removed from the bed.

Archive Tables 9 to 11, pp. 74 to 78 contain extracts which chart the activities of the principal participants in the industry over the 1900 to 1972 period.



**Plate 40: The Taita deposits before wholesale extraction of the 1950 to 1965 period, August 1947.** Source: Alexander Turnbull Library, E P Christensen, National Publicity Studios col. neg F19823.



**Plate 41: Dragline dredge, 1948, probably Avalon area, Bognuda and Adams.** Source: Alexander Turnbull Library, National Publicity Studios col. neg. F19824.

Archive Table 12, p. 79, lists the annual extraction volumes. The volumes extracted between 1900 and 1928 have been estimated by backworking the royalties collected by the Board as recorded in the Statements of Accounts and interpreted by reference to the Board Minute Papers. They should be regarded as approximate. The remaining figures are from industry returns and may not include the large volumes taken for the filling of the Taita housing area in the 1940s and 1950s. Project Report 54 is a summary of a Wellington Regional Council report which identifies volumes and sources of extraction in more detail.

Plates 42 to 49 are aerial photographs of the major plants operating during this period. The "draglines" across the river can be clearly seen. These lines were moved to access the entire bed within a radius of up to 500 m from the plant. The industry impact on the river bed and adjoining berm lands almost precluded any other activity. During the peak years pollution from wash water and from the continual disturbance of the bed turned the river milky for long periods (see plate 49).

By 1931 there were at least 12 plants operating on the river - mostly south of Belmont - and a total of approximately one million cubic metres had been extracted. The first Seaview reclamation was then well under way, with most of the filling being obtained from the river mouth; plate 37, p. 66 (the second stage was carried out in 1956 using material from the PWD quarry at Seaview). The Railways Department had dredged a large volume from the Chapmans Bend area immediately to the south of the Ava Bridge for bridge approaches and other works associated with the Eastern Railway Duplication in the 1924 to 1927 period. There had been extraction by dragline upstream of the Pipe Bridge (about 100 m upstream of the present Estuary Bridge) and from a wharf constructed for extraction on the upstream point of Gear Island. Shingle was dragged for most of the length of Strand Park to a plant operating at the end of Tama Street. Extraction also took place from a point on the tip of the Dead Arm, from beneath the Melling Suspension Bridge, from the Board's main extraction area off Stilling Road (now Pharazyn Street) and at regular intervals from Melling to Barnes' property (now the Taita housing area).

Ownership of extraction plants changed hands from time to time and plants were frequently relocated, both at the Board's direction and by owners seeking more profitable locations. Despite the downturn in demand accompanying the depression, practically the entire reach from Mabey Road, Avalon, to the mouth was dredged at the direction of the Hutt River Board.

Extraction activity peaked in the 1960s, with dredging operations and waste water from the crushing plants having a severe effect on the quality of the river environment. For extended periods the river was heavily silt laden. Despite political influence to maintain the industry (for example, the efforts of the Aurora Group of companies to retain and considerably develop the Melling extraction and processing facility). Public concern led to the hearing of the Hutt Tribunal which considered the effects of the industry activity and imposed minimum water quality standards in 1973.

The minimum water quality standards were imposed as conditions of water rights issued following the Tribunal Hearing. These conditions forced the closure of the non-conforming plants, the cost of compliance beyond the means of most of the small general contracting businesses. Within a few years most of the "characters" quit the



shingle industry, taking with them their plant.

The ruling of the Hutt Tribunal came conveniently after the major period of stopbank building which saw the extension of the flood control scheme from Boulcott to Maoribank. In excess of 100,000 cubic metres were used in the Silverstream to Maoribank reach in stopbank building and foundation works, and large quantities were relocated within the river channel to close off old channels. The industry apparently played an important role in the scheme reconstruction and extension, however, its activities, like most work during the 1960-1972 period, are now poorly documented.

The decisions of the Tribunal focused on water quality. The question of volume of extraction and the sustainable management of the shingle resource was not considered until the late 1970s and even then only in a qualitative manner. Observation of the rapid degradation of the bed in the Upper Hutt reach in the early 1980s, as occurred between 1900 and 1950 in Lower Hutt, highlighted the imbalance between the extracted volumes and the natural rates of bedload movement from the Upper Catchment. A study of the shingle resource is currently being undertaken and is the subject of **Hutt River Flood Control Scheme Review, Volume 5, River Characteristics and Sedimentation**.

The following pages record the growth of the extraction industry, mainly over the period 1924 to 1972. The major changes forced on the industry in 1973 also resulted in the changes to river management which occurred during the scheme commissioning between 1972 and 1990.

Industry activity from 1972 to the present day is covered in chapter 7, "Scheme Refinements 1972-1990".





**Plate 42: Kingdon's Beach 1955.** Mosaic by  
Air Contracts Ltd.



**Plate 43: Melling Beaches, 1955.** Mosaic by  
Air Contracts Ltd.

## The Shingle Business 1899 to 1972

(Key to abbreviations refer Archive Table 2, p. 7)

- D1: 23 Mar 1899: HRBminutes  
Wellington Harbour Board sought and granted permission to dredge for boulders and shingle in the Hutt River with a view to opening up trade with Wellington. No royalty to be charged.
- D2: 15 Jun 1899: HRBminutes: 300-310  
Extraction from beach on eastern side of River below Hutt Bridge.
- D3: 7 Sep 1899: HRBminutes  
The shingle resource should be thrown open to the public - as much should be removed as possible at no charge.
- D4: 15 Jun 1900: HRBminutes: 300-310  
Clerk to supervise extraction from beach south of Hutt Bridge.
- D5: 13 Apr 1901: HRBminutes  
River beaches closed to extraction on Engineer's recommendation. Following submissions by LHBC, PBC and others extraction permitted from Whites Line Beach (210-260).
- D6: Oct 1902: HRBminutes: 400-430  
Letter from NZR proposing a siding for carting ballast to Wellington. HRB agreed (March 1903) and suggested siding be available for use by other contractors.
- D7: Jan 1903: HRBminutes  
Shingle beach at Kingdon's licensed to Mr Jones. Continuing extraction at Whites Line. In March 1903 Jones offers to pay royalty in return for HRB putting down a siding.
- D8: Mar 1903: HRBminutes: 300-310  
HRB build access to beneath Fourth Hutt Bridge to allow extraction. HRB resolve to purchase Kingdon's Beach.
- D9: 10 Jul 1903: HRBminutes: 440-540  
Road to shingle depot, Section 31, constructed. HRB to acquire rights to road through Section 31.
- D10: 8 Sep 1903: HRBminutes: 380-410  
Rights given to Gregan to take shingle from Kingdon's Beach.
- D11: 5 Nov 1903: HRBminutes: 380-410  
Permission given to Coffey and O'Connell to extract from Kingdon's Beach. Mrs Kingdon claiming £1000 plus £21,000 compensation for shingle taken from her land by the HRB. Claim not successful.
- D12: 10 Dec 1903: HRBminutes: 170-200  
Contractor extracting from Whites Line instructed to move further south.
- D13: 4 Feb 1904: HRBminutes  
Royalty of 3d per yd charged for material removed from Kingdon's Beach as a temporary measure pending report from Engineer.
- D14: 18 Feb 1904: HRBminutes  
Instructions to Solicitor to prepare contracts for removal of shingle from 5 specified areas according to Engineer's report. Successful tenderers for beaches (refer figure 22, p. ? and Appendix A for location of beaches): Mr Jones - Beaches 1, 3, 4 and 5 @ £250 p.a. each. Pitcaithley - Kingdon's Beach (No. 2) @ £700 p.a.
- D15: 1904: HRBminutes  
NZR extract 22,000 cu. yds ballast in 1904.
- D16: 1905: HRBminutes  
Pitcaithley claim to HRB for large volumes removed from Kingdon's Beach by NZR. NZR agreement to extract 10,000 cu. yd p.a. free of royalty in return for establishment and maintenance of railway siding. NZR to pay 4d royalty for volumes in excess of 10,000 cu. yd p.a.
- D17: Mar 1905: HRBminutes  
Borough Councils to pay 3d per cu. yd royalty and to desist from taking from road reserve beneath Hutt Bridge. Tenders for beaches: beach 1 £105 (Jones); beach 2 £225 (Pitcaithley); beach 3 £40 (Coffey and Gregan); beach 4 £30 (Coffey and Gregan); beach 5 £60 (Jones).
- D18: 1905: HRBminutes  
NZR extract 17,500 cu. yds ballast in 1905.
- D19: 7 Sep 1905: HRBminutes: 330  
Coffey and Gregan claiming 4 d per cu. yd for material taken to complete stopbank at new bridge.
- D20: Mar 1906: HRBminutes  
Tenders for 3 years (not transferrable): beach 1 £85 (Posse); beaches 2 £225, beach 3 £65, beach 4 £50, and beach 5 £75 (Pitcaithley). Pitcaithley agreed with HRB/NZR that for area 2 the charge for the first 10,000 cu. yds would be free of royalty (i.e., equivalent cost of loading). When the total volume exceeded 10,000 cu. yds the removal charge would be 1/- per yd incl. royalty.
- D21: Apr 1906: HRBminutes: 200-220  
Pitcaithley to discontinue extraction from head of Gear Island.
- D22: Jun 1908: HRBminutes  
Pitcaithley failed to remove material deposited in 1907 flood. Other arrangements to be made for sale and removal.
- D23: Mar 1909: HRBminutes  
Tenders for right to extract from beaches: beach 1 £75 (Pitcaithley); beach 2 £232 (Pitcaithley); beach 3 £62 (Pitcaithley); beach 4 £75 (LHBC); beach 5 £75 (Pitcaithley). In July LHBC transfer lease for beach 4 to Pitcaithley.
- D24: 8 Dec 1910: HRBminutes: 100  
Material taken from No. 5 beach for new Pipe Bridge approaches.
- D25: 14 Mar 1912: HRBminutes  
Tenders for right to extract from beaches: beach 1 £200 (Haus and Co); beach 2 £61 (King); beach 4 PBC and LHBC @ 4d per yd royalty; and beaches 3 and 5 available to public @ 6d per yd. Haus complains that HRB going into competition and seeks uniform price setting. As a result of negotiation Haus pays £20 for beach no. 3.
- D26: 4 Jul 1912: HRBminutes: 540-600  
Pitcaithley to lay down tramway on No. 1 beach.
- D27: 4 Mar 1915: HRBminutes  
Agreement for NZR to extract 20,000 yds p.a. free of royalty.
- D28: May 1915: HRBminutes  
Lease beaches 1-5 to King Bros @ £440 p.a. conditional on PBC and LHBC being permitted to extract @ 4d. per cu. yd royalty.
- D29: 18 Apr 1916: HRBminutes  
King contract terminated after failure to remove material deposited during 1915 flood. Overseer to report on cost of the HRB undertaking the extraction. As a result of this report the HRB advertised its intention that; (1) HRB to take over the management of extraction, and (2) Commission selling agents required in Wellington. The HRB called tenders to cart and load the shingle. King was successful; To cart and load to railway trucks - (1) from Kingdon's Beach min. order 20 yds @ 1/8 per yd; (2) shovelling into trucks, 1/- per yd; (3) cart gravel from Hutt Bridge to trucks at Hutt Station, 3/- per yd; and (4) cart sand from Whites Line to Hutt Station, 3/- per yd. Cart to Wellington on motor lorries at the same rate as for railway wagons.
- D30: Aug 1917: HRBminutes  
Pitcaithleys change name to Hutt River Shingle Co.
- D31: 2 Apr 1919: HRBminutes  
Report sought from Mr Marchant (Engineer to WHB) on methods used in USA for disposal of gravels.
- D32: 7 May 1919: HRBminutes  
Overseer to prepare a report on removal of gravel from beaches using mechanical means.
- D33: 27 Sep 1919: HRBminutes  
Chairman and Overseer inspect several dredges in the South Island and return with quotes.
- D34: 3 Mar 1920: HRBminutes  
Tenders called for secondhand West Coast gold dredging barge, a 60 BHP suction gas engine, a 45 BHP suction gas engine, suction plant, and a 9" crusher and screens. Intention to make a royalty of 4d/yd for volumes of 1000 yds plus in any one job. £9000 raised for the extraction operation. Laing-Meason provided plans to show where the machinery should be located.
- D35: 20 Aug 1920: HRBminutes  
HRB not prepared to lease any beaches long-term. Short-term leases at 6d/yd.



**Plate 44: Belmont Beaches 1949.** Mosaic by Hope Cross and Richardson, Masterton.



**Plate 45: Belmont Beaches 1955.** Mosaic by Air Contracts Ltd.



## The Shingle Business (continued)

- D36: 22 Sep 1920: HRBminutes: 400-430  
Approval of new NZR ballast extraction siding at Melling.
- D37: 22 Nov 1920: HRBminutes  
Laing-Meason appointed to supervise and control dredge enterprise. Gave updated costing requiring further £4500 expenditure. Poll for loan to cover cost defeated on 1/12/20.
- D38: 11 Jan 1921: HRBminutes  
New Board elected. Submitted to ratepayers that all equipment be sold and the gravel to be marketed by means of licence areas. Licences advertised on 4/5/21. The Hutt River Shingle Co. given 3 year lease for a royalty of: 2/6 per yd from Kingdon's Beach; 1/6 per yd from other places; 6d per yd supplied to Local Authorities; 2/6 per yd for sand.
- D39: 25 May 1921: HRBminutes  
Advertised prices (by truck to Wellington); unscreened shingle 8/6 per yd; screened shingle 12/- per yd; sand 12/6 per yd. Prices on truck at Melling as above less 4/9 per yd freight.
- D40: 1922/23: HRBSOA  
Record of sale of shingle and sand (royalties).
- D41: Mar 1923: HRBminutes: 7-100  
Royalty for material used in Harbour Walls 6d per yd.
- D42: Jun 1923: HRBminutes  
Demand for shingle greater than shingle business ability to supply. Called tenders for rights to set up crushing plant at Melling. Let to Mr Turner 29/8/23.
- D43: 18 Nov 1924: SSPHRB6: 120  
Request by Engineer to Board to have a bar removed upstream of the Pipe Bridge on the line of the "Ultimate Channel".
- D44: 8 May 1925: SSPHRB6: 170-200  
PWD "scooped spoil" for reconstruction of the Ava Rail Bridge from the left bank downstream.
- D45: 1925: OAV: 170-200  
A dragline was used to obtain filling for the railway extension to Eastern Hutt.
- D46: 30 Apr 1926: SSPHRB6: 740  
Engineer's recommendation to erect crusher and bins by Melling Shingle Co. (owner probably Dexton) adjacent to land acquired by the HRB from Mr Dickie, Taita.
- D47: 8 Apr 1927: SSPHRB6  
Hutt River Shingle Co. wrote complaining about lack of sand in current excavations.
- D48: 5 May 1927: SSPHRB6: 210-230  
Portion of Gear Island north of railway bridge leased to Mr C F Pulley.
- D49: 11 Sep 1927: SSPHRB6  
Bird and Codling Bros removed shingle for supplies for new Hutt Bridge.
- D50: 16 Jul 1927: SSPHRB6 Possibly 760  
Whelan and Roberts application for crushing plant site. Site 20 chain north of Pitcaithley's plant approved. Started Nov 1927.
- D51: 18 Oct 1927: SSPHRB6  
NZR location for extraction for ballast. Extensive bed above "Andrews" opposite Groyne No. 13.
- D52: 27 Oct 1927: SSPHRB6  
Permission given to Hutt River Shingle Co. to remove sand at the upper reaches at Haywards within certain limits. Not feasible to vary the given limits at Belmont.
- D53: 13 Mar 1928: SSPHRB6: 890  
Belmont Quarry Co. Ltd. lease of river bed on north side of NZR land opposite Pitcaithleys Siding (just north of Belmont Extension) to a point 10 chains north of the company site on the Western Hutt Road.
- D54: 28 Mar 1928: SSPHRB6: 210  
McAllum and Tait; erection of wharf and dredge upstream of Ava Railway Bridge (just upstream of the line of Whites Line) on the right bank.
- D55: 24 Jul 1928: SSPHRB6: 210  
McAllum and Tait works constructed as per plan (plan on file).
- D56: 23 August 1928: SSPHRB6 (Engineer's monthly report).  
Plant erected to work the Melling shingle bed. Estimated removal of 2-300 cu. yds per day. The "old plant" removed. A dragline erected to remove shingle for the Fifth (Ewen) Hutt Bridge approaches. Crusher foundations completed for Coult's plant at Alicetown (off end of Montague Street (250)). An electric crane installed in Messrs McArthur's plant at the Estuary.
- D57: 13 Oct 1928: SSPHRB6  
Approval to Atkins and Irvine for plant upstream of the Melling Bridge, left bank. Plan on file SSPHRB6.
- D58: 15 Dec 1928: SSPHRB6: 400-800  
Hutt river Shingle Co. granted an extension of licence for the areas at Melling and Belmont for 21 years. Royalty at 8 pence per cu. yd. Same terms as granted to owners of existing underwater plant. Subject to material being taken by underwater plant to be at the direction of the Engineer. (Underwater plant presumably the dredges operating within the Estuary).
- D59: 22 Mar 1929: SSPHRB6: 460  
Re Atkins and Irvine beneath the Melling Suspension Bridge; extension of limit of shingle extraction area to the northernmost point of Groyne No. 28, provided alignment reclamation work beneath the Bridge is done first.
- D60: 19 Jul 1928: SSPHRB6  
Tender by Hutt River Shingle Co. for erection of new bins at Melling and Belmont.
- D61: 13 Mar 1929: SSPHRB6: 460  
HRB to pay Atkins and Irvine to locate dragline beneath Melling Bridge and to drag out S-bend and win metal. Cost of £150 to be deducted from £200 royalty.
- D62: 18 Mar 1929: SSPHRB6  
Plan of Hutt River Shingle Co. lease area recorded.
- D63: 30 Apr 1929: SSPHRB6: 140-150  
Extraction of sand from Jorgensen's Bend (Barber Grove, Moera) - report by H Sladden.
- D64: Nov 1929: SSPHRB6: 250  
Coutts River Shingle Co. Ltd application to install a scraper to drag metal to the radius of the dragline bucket extension. Location off end of Montague St. Approval given.
- D65: 19 Dec 1929: SSPHRB6  
Plan showing areas leased to Hutt River Shingle Co.
- D66: 21 Dec 1929: SSPHRB6: 160  
Plan showing H R Shingle Co. lease and plant area at Strand Park, on right bank halfway between Ava Bridge and Jackson Street. (Implies recent takeover of Coutts by H R Shingle Co.)
- D67: 28 Dec 1929: SSPHRB6: 460  
Approval sought for a crushing plant by Amalgamated Brick and Pipe Co. Ltd involving transfer of Atkins and Irvines' lease and permission to erect a plant in place of that operated until recently by A and I.
- D68: 25 Mar 1930: SSPHRB6: 330  
Application by Bognuda, Adams and Blyth Sand and Gravel Supplies Ltd to extract gravel (upstream of Hutt Bridge right bank).
- D69: 20 Aug 1930: SSPHRB6  
HRB prohibit removal of any sand or material east of the river at the estuary.
- D70: 29 Aug 1930: SSPHRB6  
Bognuda, Adams and Blyth seeking permission to install a crusher on the north side of existing gravel bins.
- D71: 16 Apr 1931: SSPHRB6: 530  
Proposal to install dragline upstream of Pipe Bridge.
- D72: 4 May 1931: SSPHRB6: 400-430  
River Shingle and Sand concern over condition of H.R.B.'s Melling railway siding rented to RS and S since 1923 at £100 p.a. Request for HRB to repair siding. Mouth dredging: HRB suggest that RS and S erect their plant at the mouth of the river - plant originally at Gear Island on land that was eroded.
- D73: 7 Oct 1931: SSPHRB6: 530  
Application by River Shingle and Sand to extend plant north.
- D74: 17 Nov 1931: SSPHRB10  
Letter from H Sladden to "The Dominion": approx. 200,000 cu. yds dredged from the mouth in recent years.
- D75: 7 Apr 1932: SSPHRB6  
Engineer's Report: shingle plants working reduced time because of lack of demand.
- D76: 1 Mar 1934: SSPHRB6: 180  
Application by Elsmore for a shingle lease near Berth, Levi and Co downstream of Ava Bridge, on spit of Dead Arm. Aerial dragline dredge - Engineer doubts quantity of extraction but granted approved to proceed.



**Plate 46: Wellington Conc. Pipe Plant, Haywards 1955.** Mosaic by Air Contracts Ltd.



**Plate 47: Silverstream Beach, 1955.**  
Mosaic by Air Contracts Ltd.

## The Shingle Business (continued)

- D77: 27 Sep 1934: SSPHRB6: 210-240  
Extraction area for Tait off the end of Mudie Street. Bounded upstream by Couits and downstream by Rail Bridge. Reach considered suitable for dredging, although less quantity than there used to be.
- D78: 30 Apr 1936: SSPHRB6: 180  
Plan for Bevan lease. Overlaps McAllum's lease within the Estuary.
- D79: 4 Jun 1936: SSPHRB6  
Concrete Co.'s plant (presumably forerunner to the Mill St plant or Firths Melling); new shingle plant erected for dredging the shingle bank below Melling Bridge.
- D80: 20 Aug 1936: SSPHRB6: 460  
From Wellington Concrete Pipe Co., Melling. Invoice for £75 for making a cut below Melling Bridge. Advice that they are to install crushing and screening plant.
- D81: 16 Mar 1939: SSPHRB6  
Board Meeting: Extension of Bognuda, Adams and Blyth Sand and Gravel Supplies Ltd lease for further 10 years (prob. 330). Sand removal in the lower reaches - from beaches behind Wool Scour (140-160).
- D82: 3 Apr 1939: SSPHRB6: 1020  
River Shingle and Sand request for approval in principle to extract from "Barnes Bend" opposite Taita Rock.
- D83: 30 Oct 1939: SSPHRB6: 1020  
River Shingle and Sand plant at Barnes Bend proposed.
- D84: 31 Oct 1938  
Extraction figures 1928-38 recorded.
- D85: 17 May 1943: SSPHRB6: 740  
Bognuda, Adams and Blyth granted a lease to extract from the end of Mabey Road and from Walker's Island (upstream of Belmont Extension).
- D86: June, July 1943: SSPHRB6: 730-850  
Thousands of cubic yards (volumes not recorded) extracted for Public Works' use from the "Native Lands" (now Fraser Park area) to Mabey Road for the Taita development, a Department of Housing development scheme.
- D87: 7 Mar 1944: SSPHRB6: 750  
Bognuda and Co. plant at Mabey Road. Plan of Licence Area.
- D88: Oct 1944: SSPHRB6  
Schedule of shingle, ballast and sand removed from the river between 1928-44.
- D89: 21 Sep 1945: SSPHRB6: 720  
Lease of land to Central Sand and Shingle Supplies Ltd opposite Charles St, Belmont.
- D90: 7 Aug 1946: SSPHRB6  
Phillips and Fanning; advice that they are now in a position to operate a 0.5 cu. yd floating grab at the mouth of the Hutt River.
- D91: Aug 1946: SSPHRB10  
Arrangement with PWD for removing metal from river channel.
- D92: 5 Sep 1946: SSPHRB6: 170  
Details recorded of extraction by Elsmore of a sand spit at the end of the Dead Arm.
- D93: 26 Jul 1948: SSPHRB10: 860-1020  
"Spoil for Taita Housing Block" material for stopbank adjustments being obtained from spits in the Taita reach to the advantage of the River.
- D94: 27 Sep 1949: SSPHRB10: 890 or 550  
5,400 cu. yds extracted with 2:1 subsidy from Pitcaithleys (Belmont Extension). Recommendation by Engineer to put Kingdon's Beach plant back into operation as soon as possible to remove a spit.
- D95: 17 Feb 1950: SSPHRB6: 1070-1390  
Areas of river bed between Silverstream and Pomare Bridges available for extraction of ballast for NZR. Contract documents for supply of ballast recorded, incl. spec. for ballast; 2.5" circular (i.e. rounded) downwards with not more than 15% passing 1/4" sieve and not more than 95% passing 1.5" sieve. Anticipated volume 100,000 cu. yds between 1950-53. Contract won by Downer and Co.
- D96: 21 Aug 1950: SSPHRB10: 1130-1200  
Beach at Manor Park extracted for Railway construction. This work was part of remedial works approved by the Soil Conservation and Rivers Control Council following the 1947-48 floods.
- D97: 1951: SSPHRB46: 400  
Contract to remove shingle from behind Convent, LH (Daly St/ Rutherford St).
- D98: 24 Apr 1951: SSPHRB10: 370-390  
Extraction of shingle spit on right bank below Kingdon's Beach completed.
- D99: 23 Oct 1951: SSPHRB6  
Hutt Valley and Wellington Sand, Gravel and Metal Producers' Association meeting at HRB offices on 31 Oct 1951. to express concern over the effect of Public Works Department use of gravel for filling.
- D100: 2 Sep 1953: NA 96/298000  
Extraction by PWD recorded: (does not include material used for filling) 1945 Taita Housing Block stopbank, 31,000 cu. yds; 1948 Taita Housing Block Stopbank 12,000 cu. yds; 1950 Railway formation 73,000 cu. yds; 1951 Railway formation 72,000 cu. yds; 1952 Railway formation 40,000 cu. yds; 1953 Railway formation 38,000 cu. yds. In addition by Downers for the Railway formation: 1950-2 100,000 cu. yds., and 1953 (anticipated) 25,000 cu. yds..
- D101: 17 Mar 1954: HRB8/7: 430  
7,000 cu. yds for approach roads to new (Melling) bridge (3,500 per side) requested by LHCC. Proposed to use "all-in" river material from the end of Andrews Ave, above Wellington Concrete Pipe Co. plant on east side and between Kingdon's Beach and Belmont on west side.
- D102: 29 Sep 1955: SSPHRB6  
7,500 cu. yds taken to pipe factory at Gracefield.
- D103: 6 Aug 1956: SSPHRB6  
PWD write seeking permission to remove gravel from agreed points for specific jobs.
- D104: 24 Oct 1957: SSPHRB83  
Legal opinion to HRB re dredging rights.
- D105: 5 Aug 1958: HRB8/7/10: 630-770  
"Good filling" wanted by LHCC for extension of Taita Drive from Tennyson Ave to Burcham Street. Total of 76,000 cu yds taken from Avaion area: 50,000 cu. yds from speedway (Avaion Bridge); 6000 cu. yds from Central Sand and Shingle Ltd (Mabey Road); 20,000 cu. yds from Hutt, Petone Shingle Supplies Ltd (probably Fraser Park).
- D106: 21 Aug 1958: SSPHRB6  
Wellington Concrete Pipe Co. Ltd Plan of site for proposed shingle plant, Haywards.
- D107: 1961: HRB8/7/10  
Letter from HRB to LHCC expressing concern that large volumes (greater than 200 cu. yds) should not be used for filling but conserved for aggregate purposes, following agreement with shingle companies.
- D108: 29 Jan 1964: SSPHRB90  
Letter from Commissioner of Works to Hutt Valley and Wellington Sand, Gravel and Metal Producers' Assn Inc. Total of 165,000 cu. yds required for the upgrading of the stopbanks. Two cuts will yield 130,000 cu. yds (the cut widths having been reduced to conserve shingle for extractors). The Department (PWD) have no objection to additional material being taken provided the taking does not conflict with river control work and costs do not devolve onto river work. Telegram in reply from HV and Wgtn S, G and Metal Producers Assn; "Hutt Valley and Wellington Metal Producers enter a strong protest at proposed use of large quantity of river shingle for erection of a stopbank in Upper Hutt. A limited quantity of this valuable material is available, and is largely used for housing projects. Association has an undertaking from the HRB that only small quantities of filling would be allowed to be extracted from the river bed.
- D109: 30 Jul 1964: NA 96/298000  
Letter: Hutt Valley and Wellington Sand, Gravel and Metal Producers' Assn Inc. to HRB: (a) confirming telegram to Minister stating that shingle supplies should be conserved for concrete aggregate; (b) stating that adequate quarry material available; (c) acknowledging receipt of letter from HRB indicating cancellation of licences above Silverstream.
- D110: 12 Feb 1966: HRB GENERAL  
Letter from Wilkins and Davies; concerned with recent restrictions on extraction from the lower reaches of the river. Request permission to take 60-70,000 cu. yds from the road bridge at Kaitoke.
- D111: 3 Feb 1967: SSPHRB32 and 54  
3,000,000 cu. yds extracted from 1947-67. 200,000-300,000 cu. yds for yr 1967.
- 1967-1972: Records have not been retained for this period.

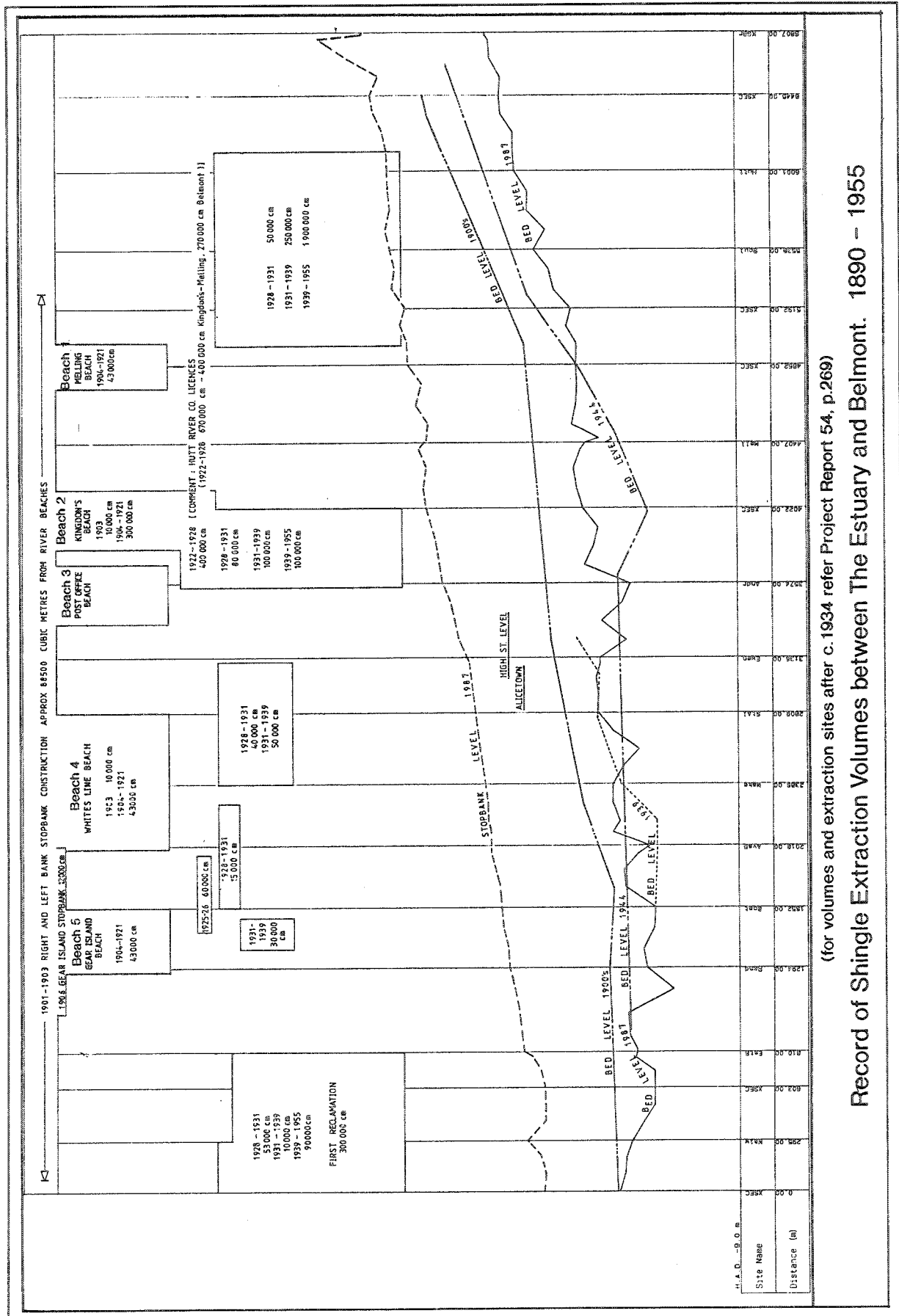
**Recorded Annual Extraction Volumes - Refer Project Report 54**

Totals to 31 March 19\*\* include licence holder returns and other known extractions taken for rivers control or stopbank building purposes. (figures in brackets are estimates)

Year	Volume (cubic metre)	Year	Volume (cubic metre)	Year	Volume (cubic metre)
1905	(37400)	1934	36,000	1963	253,000
1906	(31500)	1935	41,000	1964	283,000
1907	(25200)	1936	54,000	1965	319,000
1908	(21400)	1937	60,000	1966	286,000
1909	(21400)	1938	88,000	1967	196,000
1910	(21400)	1939	98,000	1968	246,000
1911	(29800)	1940	121,000	1969	211,000
1912	(29800)	1941	79,000	1970	234,000
1913	(29800)	1942	81,000	1971	279,000
1914	(29800)	1943	99,000	1972	234,000
1915	(29800)	1944	155,000	1973	226,000
1916	(29800)	1945	137,000	1974	237,000
1917	(29800)	1946	102,000	1975	186,000
1918	(16000)	1947	92,000	1976	152,000
1919	(15300)	1948	91,000	1977	114,000
1920	(16800)	1949	98,000	1978	145,000
1921	(17600)	1950	97,000	1979	110,000
1922	(19900)	1951	99,000	1980	93,000
1923	83,200	1952	126,000	1981	175,000
1924	99,500	1953	131,000	1982	185,000
1925	118,700	1954	(180,000)	1983	145,000
1926	112,000	1955	178,000	1984	175,000
1927	132,000	1956	168,000	1985	161,389
1928	122,000	1957	186,000	1986	118,231
1929	91,000	1958	190,000	1987	109,500
1930	96,000	1959	(195,000)	1988	77,000
1931	57,000	1960	205,000	1989	99,500
1932	64,000	1961	224,000	1990	60,000
1933	42,000	1962	240,000	1990	

**Archive Table 12: Annual Volumes of Shingle Extraction; 1900 to 1990.**

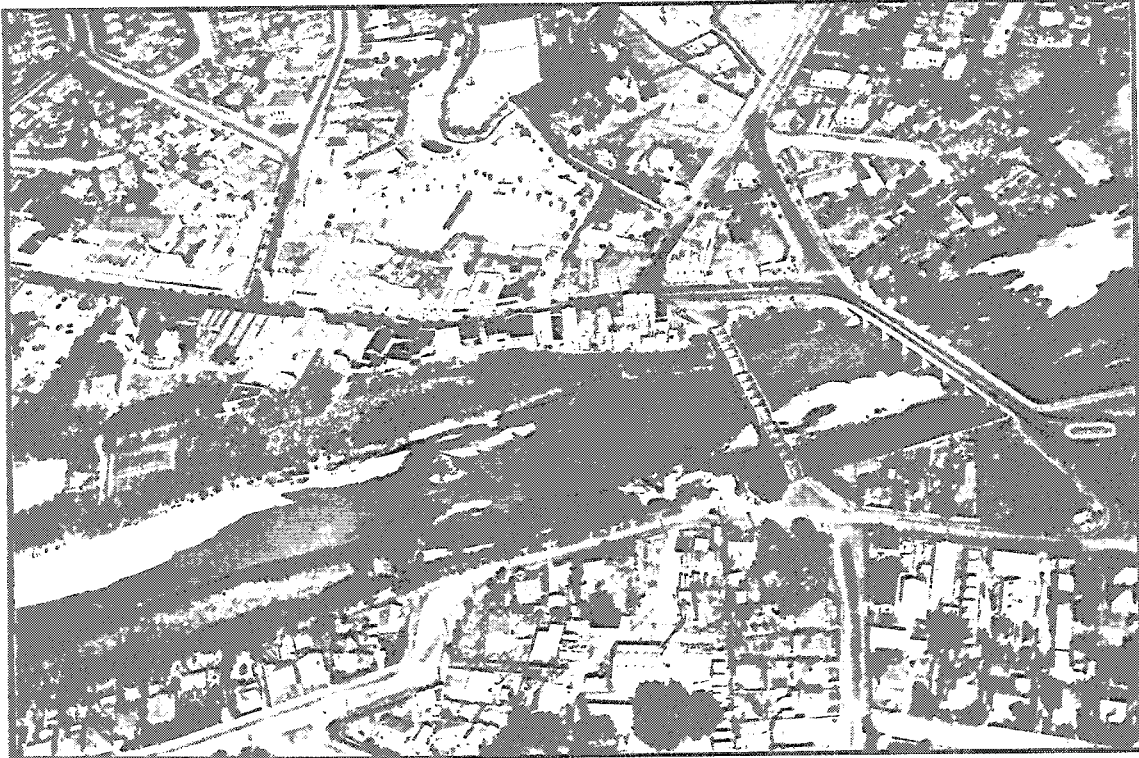




(for volumes and extraction sites after c.1934 refer Project Report 54, p.269)

**Record of Shingle Extraction Volumes between The Estuary and Belmont. 1890 - 1955**

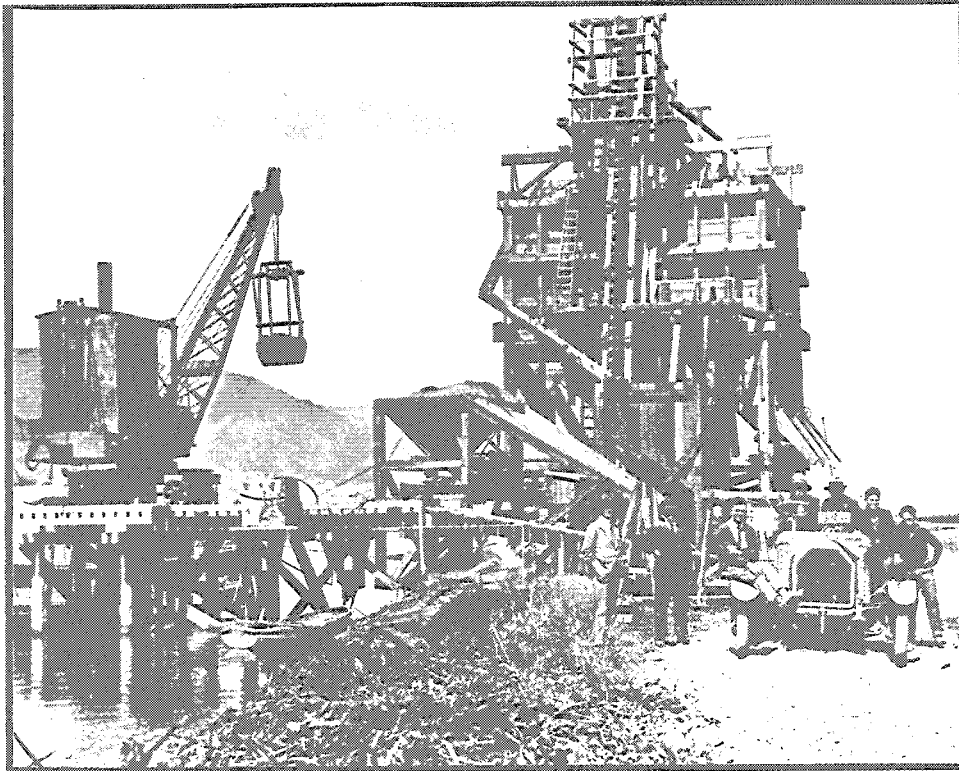
Figure 12: Log of Extraction Activity, Estuary to Belmont, 1900-1955.



**Plate 48: Atkins and Irvine/Bognuda Plant ca. 1934** Source: Evening Post Collection, ATL neg. F122249



**Plate 49: McAllum's Wharf (near Ava Br.) and Coult's.** From mosaic by Hope Cross and Richardson, Masterton.



**Plate 50: MacArthur Bros Plant, River Mouth 1926.** Source: Alexander Turnbull Library, neg. 45111