

Long Term Plan of Management – Solid Waste

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Robert Bailey Consulting
Unit 408/12-24 William Street
Port Macquarie NSW 2444
Phone 0448 737 383

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1. Overview

In April 2009, Council adopted a Waste Management Strategy designed to chart operations of its waste facilities and the delivery of waste services for the Shire throughout the medium term. The strategy identified major issues, established a number of aims and objectives, set diversion targets and developed actions to address known issues and to deliver the stated aims and objectives.

In the intervening period, some issues have been overcome, other issues have emerged, a number of the aims and objectives have been realised, some aims and objectives are no longer relevant and others remain outstanding.

Since 2009, the number of waste facilities has been rationalised and domestic waste/recycling services have been extended resulting in the Gilgandra Waste Facility being the only actively operating landfill within the Shire. The Arthursleigh Road Waste Storage Tyre Facility holds an Environment Protection Licence (EPL number 12069) as the repository for used tyres but no longer accepts used tyres. This Long Term Plan of Management (LTPoM) includes guidance on how the used tyres can be removed from the Arthursleigh Road facility, the site rehabilitated, and the EPL surrendered.

The 2009 Waste Management Strategy examined the delivery of domestic waste collection services and considered the expansion into organics collection and processing. To date, a compelling case for organics collection and processing cannot be made. There are alternative beneficial re-uses of organics in the operation of the Gilgandra Waste Facility as re-vegetation medium over final capping, for erosion control, sedimentation management and for dust control.

It should not be assumed that the Carlginda recycling processing centre will continue in its present form well into the future. Recent disruptions to the recycling industry have devalued a number of recyclable materials and tested the viability of some processing facilities. This is not to say that recycling generally will not continue, however it may be in a different form that will see a change in cost structures that may reflect as increased costs to residents.

The Gilgandra Waste Facility is the centrepiece of the LTPoM which replaces the 2009 Waste Management Strategy. Concept designs have been prepared that will provide up to 80 years of residual life for the landfill. These designs offer guidance on the staging of the landfilling operations and provide the final landform design. Improvements to some current landfilling practices have been identified which should result in better environmental performance and cost efficiencies. Changes will be introduced as to how some materials are managed and consider how fee structures will need to be reviewed and adjusted routinely to support the sustainable development of the landfill.

2. Background

Gilgandra Shire Council has recognised the need to update or replace the 2009 Waste Management Strategy whereby the future provision of waste infrastructure and waste services can be ensured. This Long Term Plan of Management replaces the 2009 strategy and has undertaken an examination of Council's core waste facilities and services. It has determined the most cost effective and efficient means of delivering sustainable waste management services to its residents, while considering risks and ensuring facilities are compliant with the requirements of the Protection of the Environment Operations Act (1997) and Regulations and the Environment Protection Authority (EPA) Environmental Guidelines: Solid Waste Landfills (2nd edition 2016) and meeting industry best-practice. This long term plan of management builds upon the achievements already realised by Gilgandra Shire Council, and has identified where further improvements can be introduced.

3. Purpose

The purpose of this Long Term Plan of Management is to provide a process with the highest probability of achieving the defined aims that would address long term planning and future operations of the Gilgandra Waste Facility and the provision of domestic waste collection and processing services.. It considers the final landform, activity area interrelationships, existing and future infrastructure, applying fees and charges, complying with the EPA Environmental Guidelines, valuing responsible environmental performance, improving existing landfill management practices, addressing risks and recognising resource recovery opportunities.

The primary aims of the project are to:

- put measures in place that will maximise the residual life of the landfill;
- identify improvements to existing landfilling practices and to collection services that will translate into cost efficiencies and provide for the implementation of these opportunities;
- develop plans for the coordinated development of the Gilgandra Waste Facility over the longer term;
- engage practices that will ensure responsible environmental performance is maintained;
- comply with environmental guidelines, relevant legislation, regulations and codes;
- identify and mitigate risks;
- ensure succession planning.

4. Operations

There are three key elements to the long term plan of management:

- a) Gilgandra Waste Facility,
- b) Arthursleigh Road licensed tyre repository and
- c) Domestic waste/recycling collection/processing services

a) Gilgandra Waste Facility

Overview

The Gilgandra Waste Facility is located off Collision Drive, about 3 kilometres from the Gilgandra town centre, and is open Monday to Friday between 9.00 am and 5.00 pm, and on Saturdays and Sundays between 10.00 am and 4.00 pm for the acceptance of municipal solid waste including commercial and bulk wastes and limited regulated wastes such as asbestos. The facility is closed on public holidays.

The Gilgandra landfill is the only active waste facility in the Shire, with the village landfills at Tooraweenah and Armatree and the waste transfer stations at Bidden and Curban having been closed and rehabilitated as part of Council's rationalisation plan.

The entrance to the facility is the control point for incoming wastes and is where loads are examined, assessed, fees applied to commercial loads and instructions given for waste placement. Small quantities of self-haul mixed waste are directed to the transfer station and bulk waste sent to landfill. Segregated loads of concrete, green waste, used tyres, mattresses and scrap metal are taken to the respective stockpiles. A community recycling centre (CRC) is the receipt point for all household problem wastes which is serviced under contract through the NSW Government as is the drumMuster compound where empty agricultural chemical containers are deposited. The site management function is undertaken by Carlginda staff who operate the on-site Material Recycling Facility (MRF). Carlginda is a social enterprise organisation which provides care and employment opportunities for those with special needs within the Gilgandra community.

The landfill provides for the disposal of self-haul waste by local residents and is the main receipt point for all commercial and industrial wastes, all construction and demolition wastes and domestic kerbside-collected general waste. Other materials accepted include green waste, builder's waste, concrete, clean fill, problem wastes, waste oil and scrap steel. Materials such as tyres, chemical drums, asbestos and animal carcasses are generally accepted and fees are applied for these materials (triple rinsed drumMuster containers are free). The quantity of waste received annually is approximately 1,800 tonnes.

Kerbside-collected recyclables, bulk recyclables from the Armatree and Tooraweenah drop off centres and self-haul recyclables are processed at the Material Recycling Facility (MRF) operated on site by Carlginda.

Plant

The landfill operations are undertaken by Council staff and the principal item of plant is a Caterpillar 963 D traxcavator which has the capability of placing/pushing up waste, track compacting, forming berms, placing and trimming cover material and loading. Traxcavators are versatile machines and suitable as a sole item of plant for landfill operation receiving up to 5000 tonnes of waste per annum. The, existing traxcavator is planned to be replaced with a similar machine before it has reached 5000 hours of usage. The internal plant hire rate is \$85/hour with the machine being use about 15-20 hours per week..

Landfilling

The “trench and fill” method has been the historic and current means of waste disposal. There are three identified sub stages to continue with the trench and fill method before the remaining virgin ground is exhausted and these appear as Appendix 1. The residual of sub stage A combined with sub stages B and C should provide landfilling for around the next 15 years. The area occupied by these sub stages has been identified in the Amaral concept designs (Appendix 2, figure 16) as a future borrow area for daily cover and for final capping. However, this area will be excavated in sub stages and landfilled before commencing the proposed overtopping. The excess excavated spoil will be stockpiled for future use as cover and for capping. There is likely to be a deficiency of on-site available cover material over the design life of the landfill and external sources of cover material should be identified and secured progressively. This may include further on-site stockpiling. .

Final landform design and filling plans have been developed by geotechnical (landfill) engineer Robert Amaral and these appear as Appendix 2. Overtopping will provide the community’s waste disposal needs well into the foreseeable future.

Leachate Management

The landfill does have a leachate management system installed within the current waste disposal area. The floor of this stage is graded to a sump and the collected leachate is pumped to a leachate evaporation pond. This method of leachate management has been undertaken for past stages and is intended to be adopted as subsequent excavated stages are developed.

However, for future leachate management where overtopping is proposed, control may rely more on good practices to minimise the production of leachate. Such practices include keeping the active tipping face to minimum size, regular covering of waste, diverting surface water away from the tipping face, maintaining gradients on the covered areas to shed water, compacting waste and applying intermediate cover to surfaces that will be exposed for more than 30 days.

Waste Concrete Management

There is a legacy of the past acceptance of concrete and masonry whereby a large quantity of these materials remain on site. Some of the material could be crushed into useable products but would require testing for both chemical and physical contamination before being sent off-site. This is an impediment to the viable recovery and re-use of waste concrete. The cost of sorting, crushing, screening and testing would likely be a major expenditure. A simpler and cheaper option would be to continue to stockpile waste concrete in its current location and to shape the stockpile to approximate the design RLs for the final landform. Profiles should be established or height pegs to provide guidance in achieving the desired shape. An excavator with a jack pick should be engaged from time to time to break up the larger pieces of waste concrete so as to minimize any voids within the stockpile mass. As the desired RLs are achieved for a sizable portion of the waste concrete,

final capping can be applied in keeping with the final landform RLs. Alternatively, waste concrete can be co-disposed with general waste at the active tipping area.

A second alternative would be to use the waste concrete to form starter berms and internal berms in preparation for and during the overtopping process. These berms would provide containment for when the general waste is being placed and compacted and then absorbed into the waste mass. The concrete berms are likely to be porous and could allow any leachate that might be generated during the waste placement and compaction process to migrate through the berm. It would therefore be prudent to line the face of the berms with ENM as a measure to contain any leachate within the active tipping area. Disposing of waste concrete progressively should be a preferred option.

Organics Management

Council currently segregates clean timber and wood waste and has created a stockpile for the retention of these materials. A contractor is engaged to shred these organic wastes from time to time under a contract established by the regional waste group NetWaste. In the past, shredded green waste could be sold or given away, but with the introduction of the Resource Recovery Order and Resource Recovery Exemption for mulch (revised 2014) it is now most difficult to meet the requirements of the Order and the Exemption. NetWaste has developed a protocol to enable mulch to be taken off site from waste facilities, but again the process is demanding. (*Protocol for the Management of Organic Material at Waste Facilities relevant to the EPA Resource Recovery Order and Exemption for Mulch*)

Council has undertaken preliminary investigations into introducing a kerbside organics collection service and composting this material together with self haul green waste. Consideration was also given to transporting these materials to the Organics Resource Recovery Facility (ORRF) at Dubbo. A cost/benefit analysis could not support either option.

The likely best option is to shred the self haul organic inputs for on-site re-use as the re-vegetation medium over the final cap, for erosion/dust control, for the formation of berms and blending with ENM for cover material. With EPA approval, it could be used as intermediate cover above any shredded tyres brought from the Arthursleigh Road tyre repository for disposal. Composite, laminated and painted wood waste should go directly to landfill.

Scrap metal

Scrap metal is stockpiled in a separate area and is well controlled. The scrap metal is taken off site by a metals recovery contractor to ensure materials are removed or processed routinely so that the stockpile is maintained at a manageable size. Fluctuations in the market value of scrap steel have an effect on the frequency on the removal of this material from site.

Agricultural tarpaulins

These can be separated and baled/strapped with the intention of recycling. Not all types of agricultural tarpaulins are recyclable and many are of little commercial value. Unless there is a viable market for the recovered tarpaulins, these should be landfilled. Waste materials that are difficult to handle, such as large tarpaulins should have a gate fee applied that is reflective of the true cost of their disposal.

Deceased animals and asbestos disposal

Asbestos is currently disposed of in a separate trench as are deceased animals. This practice is not uncommon at rural landfills but requires the management of multiple activity areas and a concentration of problem waste types. An objective of the long term plan of management is to rationalise the number of waste disposal activity areas and to aggregate the operations of the waste facility rather than have them spread throughout the facility. Both deceased animals and asbestos can be placed at the toe of the advancing face of the general waste disposal area and covered with excavated natural material (ENM) then overtopped with general waste. For asbestos, the depth of soil should be 1 metre as prescribed in the Waste Regulations (2014) (see Appendix 3) before overtopping with general waste. The depth of soil cover for deceased animals is not prescribed in the Waste Regulations (2014) and therefore can be at a depth determined by the on-site plant operator or supervisor

Used tyres

These are stockpiled and transported off site routinely for disposal by a service contractor. The number of tyres retained on site at any one time does not generally exceed 50 units and gate fees are applied to meet the cost of disposal. Large commercial tyres are not accepted at the facility.

An area has been identified within the site where the large stockpiles of used tyres from the Arthursleigh Road tyre repository could be shredded and placed at a shallow depth across this previously landfilled area (see Appendix 1). The quantity of used tyres retained at the Arthursleigh Road site is significant and has been assessed at about 3,500 tonnes. The risks associated with the retention of such a large quantity of tyres should not be underestimated. If taken to the Gilgandra Waste Facility, the shredded tyres would be shaped with a central spine and a minimum gradient of one percent. Intermediate cover would be applied to a depth of 300 mm (compacted) and overtopped with shredded green waste. The quantity of cover material required to complete the disposal has been assessed at around 3,000 cubic metres (uncompacted). Part of this cover material and revegetation medium (shredded green waste) could be recovered when the overtopping method commences in future years.

This approach has been discussed with officers of the EPA and has received in principle support. (see Appendix 4)

Fees and charges

Gate fees are applied to commercial and industrial waste material delivered to the Gilgandra Waste Facility for disposal or re-processing. Gate fees are not applied to domestic self haul wastes. Council also applies an annual charge to rateable premises under Section 501 of the Local Government Act for access to waste facilities.

Fees and charges should be reviewed annually to ensure the fees being applied are reflective of the cost of providing the service. This should include the application of fees for “difficult” waste types.

b) Arthursleigh Road Tyre Repository

The Arthursleigh Road tyre repository holds an EPA licence (EPL 12069) and occupies approximately 5 hectares of land just off the Castlereagh Highway on the western approach to Gilgandra. The quantity of used tyres retained on site is significant and there are currently no

feasible technologies whereby these tyres can be recycled or re-used. The retention of these tyres poses several major risks including fire, harbourage for vermin, complaints from adjoining property owners and an order from the EPA that the tyres be removed and taken away for disposal. Although Council has a Pollution Incident Response Management Plan (PIRMP) for the Arthursleigh Road facility that is tested, reviewed and updated annually, this provides no certainty that a fire will not occur and result in a major pollution incident.

Preliminary investigations indicate that the tyres can be shredded and taken to the Gilgandra Waste Facility for disposal. An area within the Gilgandra landfill has been identified as suitable after consulting a geotechnical engineer and an officer from the EPA.

Depending on available funds, the shredding and landfilling could be undertaken in stages or as a single project. Once completed, the Arthursleigh Road site should be rehabilitated and the Environment Protection Licence (EPL) surrendered to the EPA. Council could then make a determination on the future use or sale of the site.

c) Domestic Collection Services

The current waste and recycling collection contract with J R Richards and Sons commenced on 1st July 2016 and concludes on 30th June 2023. The contract provides for-

- Collecting general waste from residences at Gilgandra, Tooraweenah and Armatree and transporting the waste material to the Gilgandra landfill located within the Gilgandra Waste Facility for disposal
- Collecting recyclable materials from residences at Gilgandra, Tooraweenah and Armatree and transporting the recyclable materials to the Materials Recovery Facility located within the Gilgandra Waste Facility for re-processing
- Servicing street litter bins within the townships of Gilgandra and Tooraweenah and transporting the waste material to the Gilgandra landfill located within the Gilgandra Waste Facility for disposal
- Servicing 240 litre residual waste receptacles from commercial premises, schools and residential flat buildings and transporting the collected waste to the Gilgandra landfill located within the Gilgandra Waste Facility for disposal. Commercial premises are serviced twice per week on the days nominated within the tender specification.

Approximately 1600 x 240 litre residual waste bins are serviced weekly, 1200 x 240 litre recycling bins are serviced fortnightly and 50 street litter bins are emptied three times per week.

The 2009 Waste Management Strategy examined the delivery of domestic waste collection services and considered the expansion into organics collection and processing. To date, a compelling case for organics collection and processing cannot be made. There are alternative beneficial re-uses of organics in the operation of the Gilgandra Waste Facility as re-vegetation medium over final capping, for erosion control, sedimentation management and for dust control.

It should not be assumed that the Carlginda recycling processing centre will continue in its present form well into the future. Recent disruptions to the recycling industry have devalued a number of

recyclable materials and tested the viability of some processing facilities. This is not to say that recycling generally will not continue, however it may be in a different form that will see a change in cost structures that may reflect in increased costs to residents

It is not envisaged that any significant changes will occur to the present suite of domestic waste management services over the medium term. However, Council should consider any influences on the collection and processing services when preparing specifications for the next collection contract in 2023 resulting from changed practices within the waste industry or from government legislation including the NSW Government 20 year strategy that will come into effect in late 2021.

5. Landform Concept Design

Final landform design and filling/staging plans have been prepared for the future development of the Gilgandra landfill and these appear in Appendix 2 as:

- Explanatory Notes to Accompany Conceptual Design Drawings ,
- Figures 1 -11 (staged development and final landform),
- Design Principles and Design Concepts (figures 12 – 17)

This suite of documents provides information on the development of the landfill for future decades and offers guidance for the orderly progression of the landfilling operations. Each stage is essentially a building block that in total combination will deliver the final landform. It will be most important that the design is followed in order to deliver the desired outcomes. This may require periodical examination by an external party (surveyor, geotechnical engineer) to confirm the landfilling works are progressing in keeping with the adopted designs. **Note** – works proposed in figure 3 have been completed and landfilling operations are being undertaken as outlined in Appendix 1. At the conclusion of landfilling as shown in Appendix 1, operations will commence as indicated in the Amaral concept design starting with figure 4.

Council should also be aware that overtopping is construction work that requires skilled plant operators, correct plant, an understanding of grades, reduced levels, waste placement, surface water management, covering and compaction. Site personnel and supervisors should be trained accordingly and be familiar with the designs and the principles supporting those designs. Overtopping also requires large quantities of soil and the stockpiles of soil currently retained on site together with potential excess from the excavation of the two future trenching stages (Appendix 1) are unlikely to be sufficient over the residual life of the landfill. Additional sources of material should be sourced progressively and stockpiled on site when opportunities are presented

6. Acts and Policies Associated with the Project

- Protection of the Environment Operations Act 1997
- Protection of the Environment Operations (Waste) Regulation 2014
- EPA Environmental Guidelines: Solid Waste Landfills (2nd edition 2016)
- Environmental Planning and Assessment Act 1979
- Environmental Planning and Assessment Regulation 2000
- Infrastructure SEPP 2007
- EPA Licence (licence number 12069 – Arthursleigh Road)

7. Appendices

Appendix 1: Site Layout and Survey Plan



Site Layout,
Gilgandra Waste Facility



SET OUT CONTROL (MGA55, GDA94)

STN	EASTING	NORTHING	R.L.	TYPE
1	655938.048	648977.297	293.658	STEEL ROD
2	655936.204	648947.288	293.486	STEEL ROD

LOCATION PLAN

Drawn: A.H.D.	Drawn Origin: PAJ.38574	Drawn by: D.P.	Issue: 0	Issue Date: 30/03/2021	<p>PLAN SHOWING PROPOSED DESIGN FOR THE LAND FILL CELL AT THE GILGANDRA WASTE FACILITY.</p> <p>Lengths are in metres. Reduction Ratio 1:1500 @ A2</p>	<p>Prepared by:</p>  <p>LANGFORD & ROWE CONSULTING LAND MINING, ENGINEERING, GPS SURVEYORS AND 3D LASER SCANNING 46 CHURCH STREET, FIRST FLOOR, DUBBO NSW 2830 PO BOX 370 DUBBO Phone: (02) 8852 1611 Fax: (02) 8851 8276 Email: langrowe@langrowe.com</p>
Contract Interval: 0.20m	Drawn File: 285.607	Issue Date: 30/03/2021	Surveys Ref: 2021.047	Drawing Number: 2021.047_GIL_TP--_0001		
Date of Survey:	Surveyed by: D.P.	County:	<p>L.G.A. GILGANDRA Locality: GILGANDRA Parish:</p>			

Appendix 2: Explanatory Notes and Concept Designs

ROBERT H. AMARAL B.A. B.A.Sc. M.A.Sc.

Consulting Geotechnical/Landfill Engineer

PO Box 365
Kurrajong NSW 2758
(ABN/GST Reg. No. 63 323 393 709)

Tel. (02) 4572 1122
Mob. 0419 683 114
Email: bobamaral@bigpond.com.au

GILGANDRA SHIRE COUNCIL
Conceptual Design/Plans
Gilgandra Landfill

Gilgandra
November 2013

New South Wales
13008

Explanatory Notes to Conceptual Drawings

Figure 1: Outlines the entire waste recovery and disposal facility at Gilgandra.

Figure 2: Provides an expanded view of the recommended waste filling portion of the site. The southern and northern one third areas of the site have already been covered in waste to a variable depth. The northern one third area includes asbestos within the waste. It is recommended that these already filled areas be overtopped with waste. The current active landfill cell is the old leachate pond, with spoil from the cell, stockpiled for future capping

Figure 3: The nominated current waste filling area shown has now been capped. This area is the first lift above ground level and is shaped to drain surface stormwater. The recommended sequence of filling for this area is illustrated in figure 12.

Figure 4: Illustrates the completed Stage 2. The final level of this completed Stage 2 area grades from RL299 to 298 with a top width of just over 20 metres, which is inadequate to operate waste delivery trucks and operate other equipment. In practice this area should be raised to about RL296 and then commence construction of the adjoining Stage 3 area. Once the Stage 3 area reaches the RL296 the combined Stage 2 and Stage 3 areas can then be raised to the final height together. The initial starter bund (1 metre high) should have a batter slope of 1:1 (refer figure 15). Subsequent external (final) soil batter lifts should be sloped at 3:1. Internal temporary batters should be sloped as steeply as practicable to save soil. The batter slope actually used varies from site to site depending on the experience of the operator. The batter construction technique recommended is illustrated on figure 13.

Figure 5: Illustrates the completed Stage 2 and Stage 3 landform. There is likely insufficient room to allow placement of waste to RL 301 and this upper area will likely have to be completed as part of the Stage 4 filling area. During the placement of waste within the Stage 3 area, the temporary soil bund along the western side of Stage 2 should be removed as far as practicable as illustrated on Figure 13.

Figure 6: Illustrates the completed landform for Stages 2, 3 and 4. The top gradient is 7% to encourage direct rainfall runoff and to allow for some inevitable settlement resulting in a final grade of 5%. This figure shows a narrow 3 metre buffer along the eastern side of Stage 2 and a 5 metre buffer along the southern edge of the landfill footprint. Where previous landfilling allows, these buffers should be maintained to allow ready future access and maintenance from the toe area of the landform. During placement of successive lifts of the waste the existing soil cover should be bladed away from the leading edge of the advancing fill face to allow waste to waste contact and encourage vertical migration of leachate as illustrated on figure 14.

Figure 7: Illustrates the completed Stages 2, 3, 4 and 5 with a top RL of 302. The eastern, southern and western batters have a slope of 3:1. At this stage the batters are to be mulched, seeded and slashed as required to achieve a heavy vegetated cover for erosion control. As noted on this figure the balance of the future filling area should have been graded, ditched and / or bunded to promote clean rain water runoff. Areas excavated for soil cover should be graded to collect rainwater runoff in low spots to allow the pumping of this clean water direct to the environment.

Figure 8: Illustrates the raising of the area adjoining Stage 1 (Stage 6) to form a large, regular shaped portion of the site which is grade to shed surface to the east. These areas are shown as individual stages but in fact should be divided into several individual bunded sub-stages to maintain small, controlled areas of filling. At this time Stage 6 will likely have been partially excavated for soil cover. The excavated soil borrow area will need to be raised to original ground surface in sub-stages similar to those illustrated in figure 12 for Stage 1.

Figure 9: Illustrates the completed Stage 7. During the placement of waste in this stage the existing temporary soil bunding along the northern side of Stages 2 and 3 will need to be progressively removed as shown in figure 13. It will also be the case that the waste filling to RL302 will likely need to be carried out as part of the Stage 8 filling. The final 3:1 side batters along the eastern side of Stage 7 should be finally covered, mulched seeded and slashed at this stage at this stage.

Figure 10: Illustrates the completion of Stages 8 and 9, carried out in smaller sub-stages.

Figure 11: Illustrates the final landform design.

Figure 12: Shows the sequence of events necessary to raise the current waste filling area to above existing ground surface in the dry. In this regard, an area of the site should be selected which will not allow surface water runoff to be used as a leachate evaporation or evapo-transpiration area.

Figure 13: Illustrates how successive layers of waste should be placed behind temporary soil bunds and then progressively removed when waste is placed in adjoining stages.

Figure 14: Illustrates how previously placed soil cover should be removed prior to the placement of successive lifts of new waste.

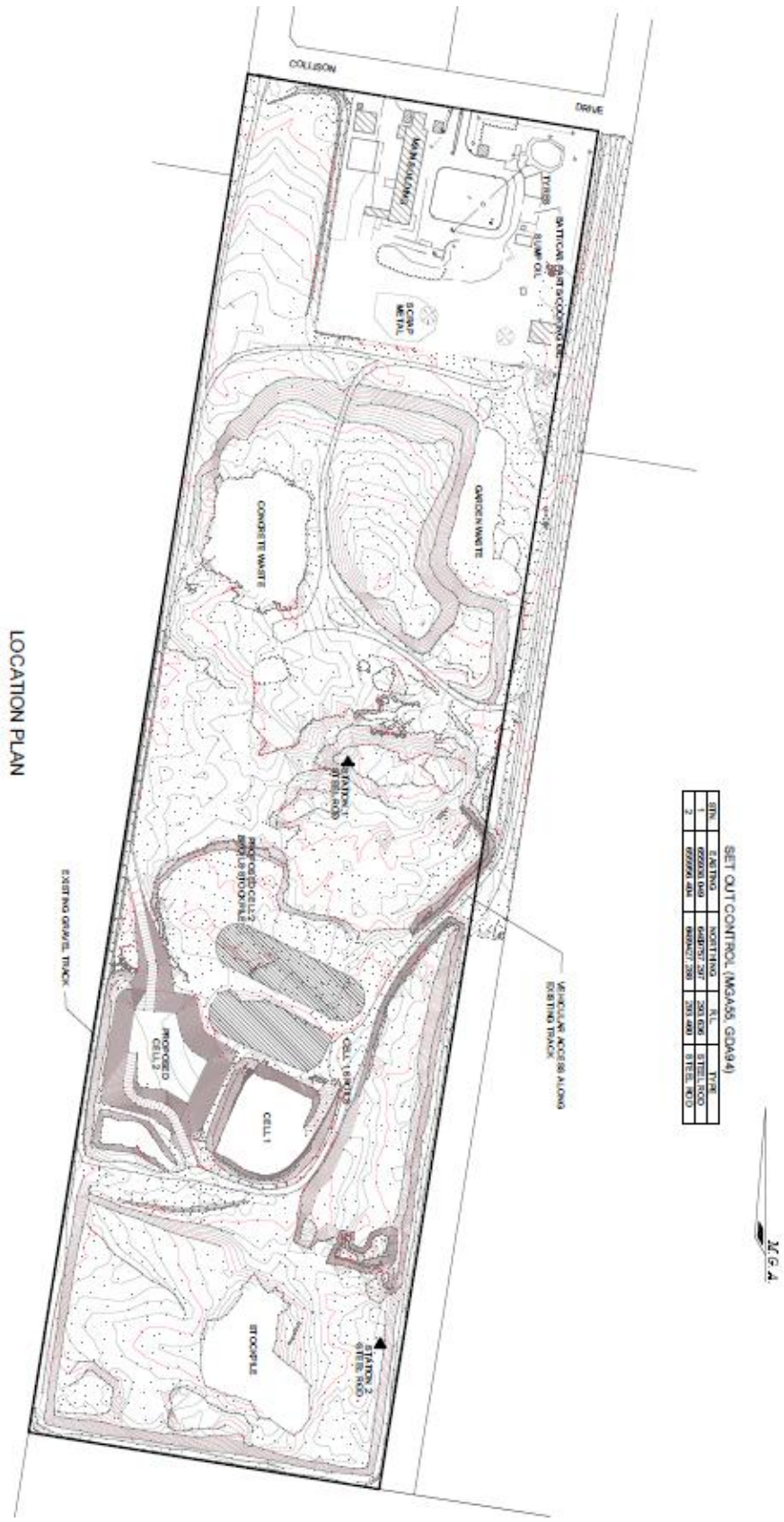
Figure 15: Due to the presence of earlier deep cells there will be significant differential settlement at the natural soil/waste interface. The initial 1:1 soil bund is to allow the excess soil to be progressively pushed and graded over the shear zone as the waste settles.

Figure 16: Outlines a possible area for soil borrow. This area is the current active landfill cell and proposed next landfill cell. The precise area available is dictated by existing old cells. The base of the cells is to be graded towards the existing sump well in the current active landfill cell to provide adequate drainage of leachate to the de-leaching well.

Figure 17: A typical de-leaching well and leachate collection line is illustrated on this figure.

SITE PLAN

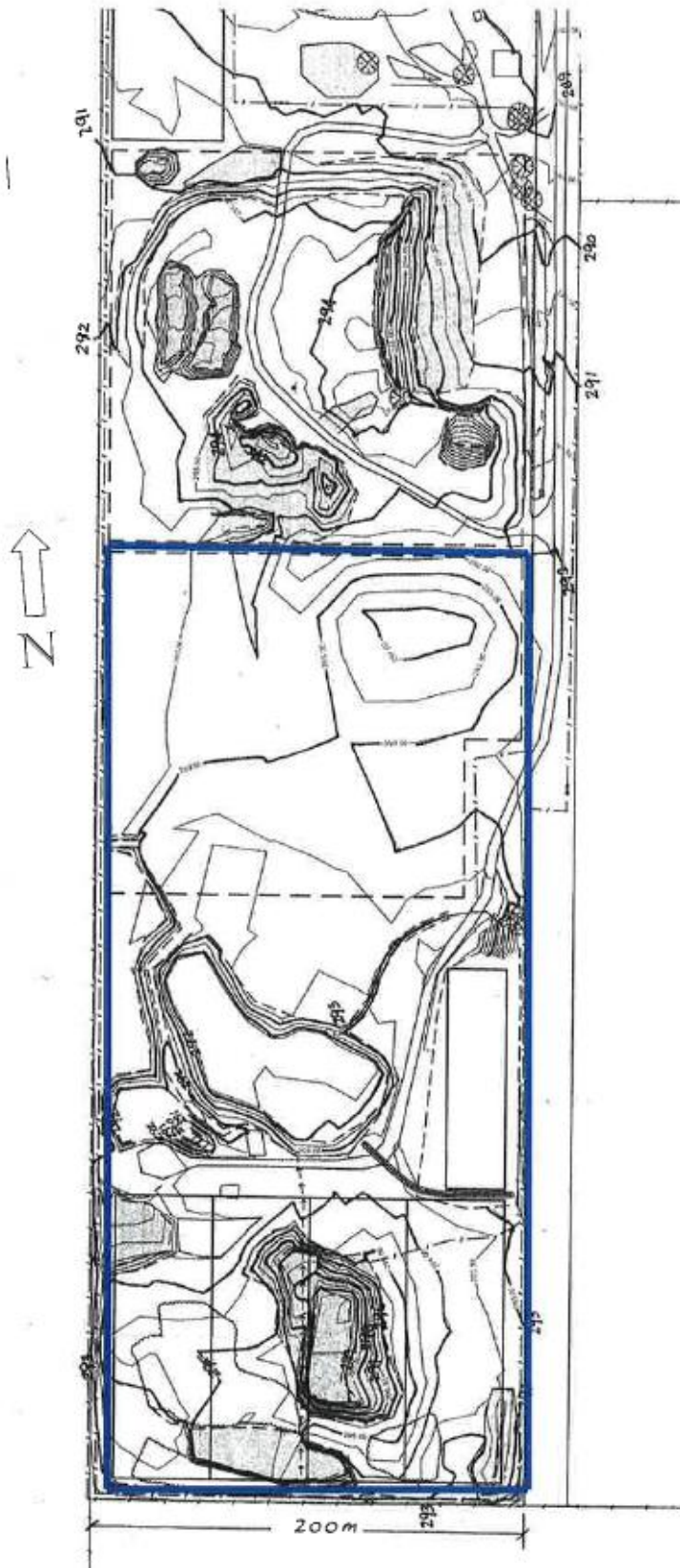
FIGURE 1



LOCATION PLAN

RECOMMENDED WASTE FILLING AREA

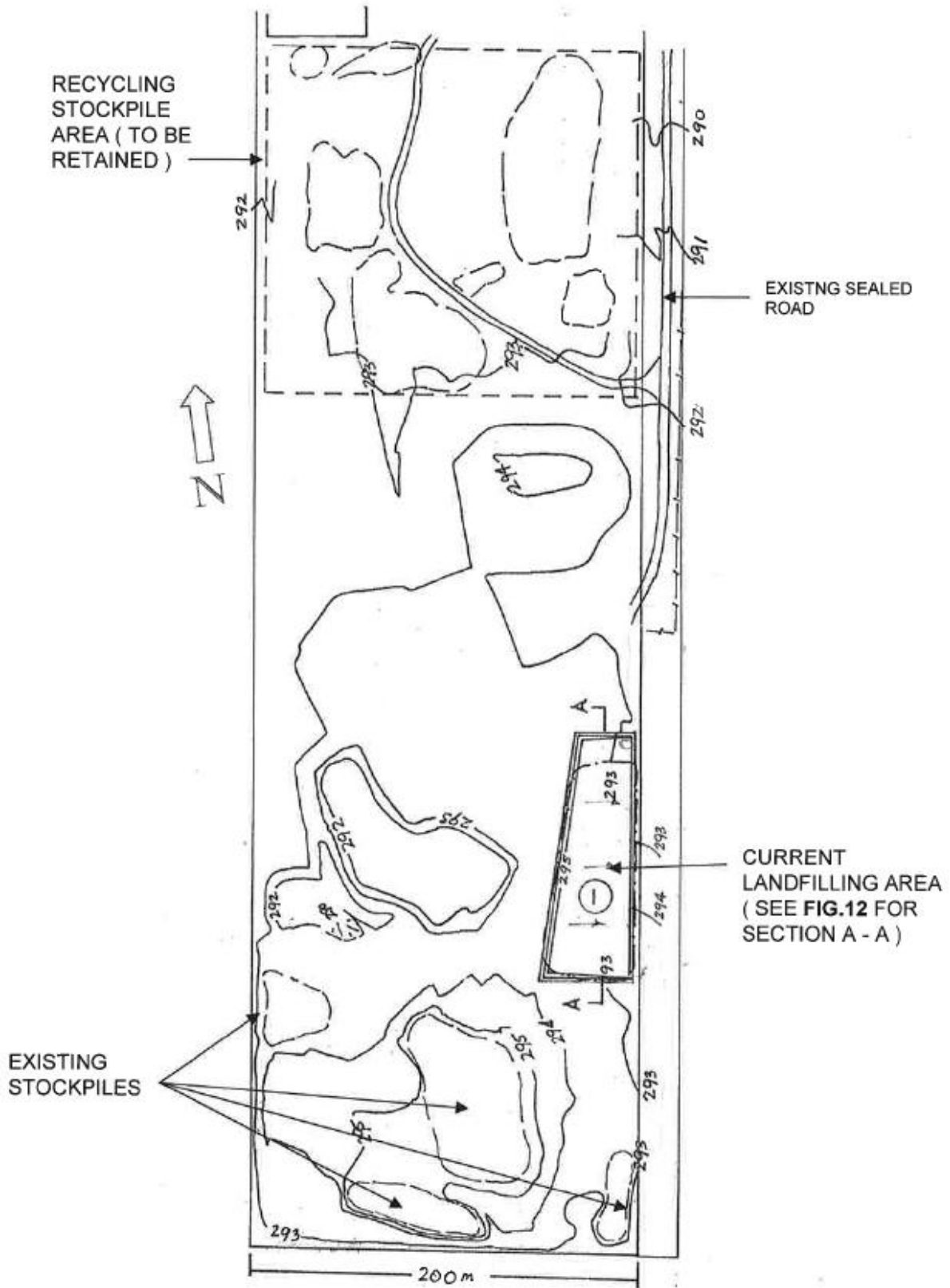
FIGURE 2



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STAGE 1 FILLING PLAN

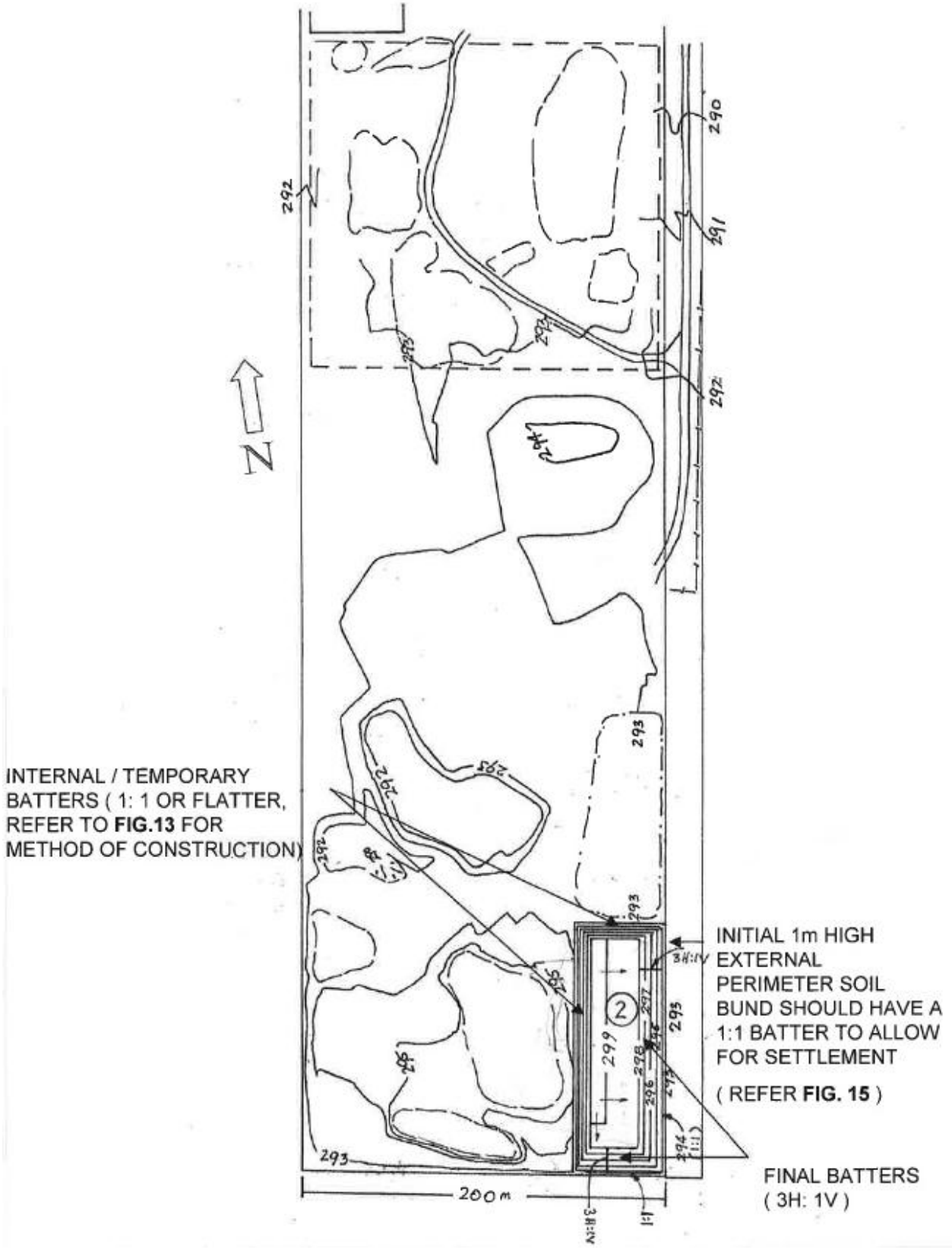
FIGURE 3



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STAGE 2 FILLING PLAN

FIGURE 4

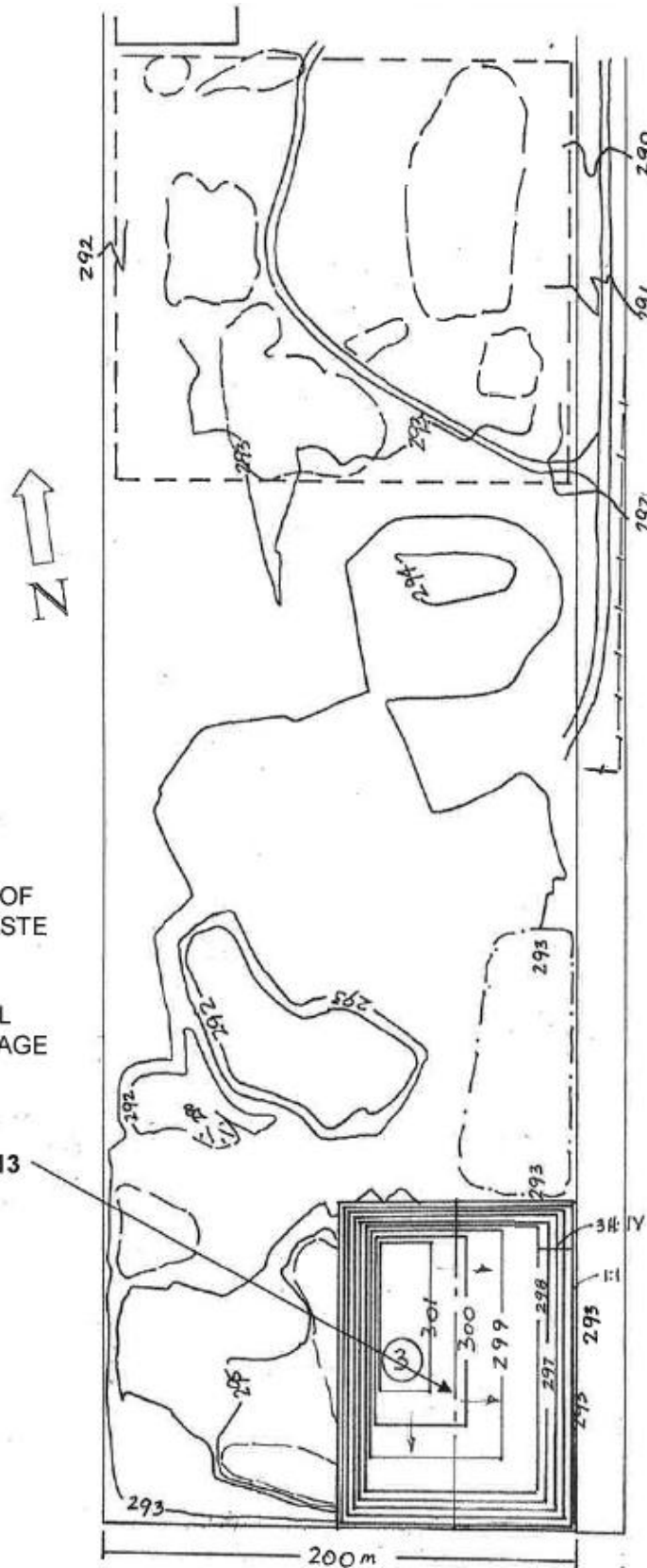


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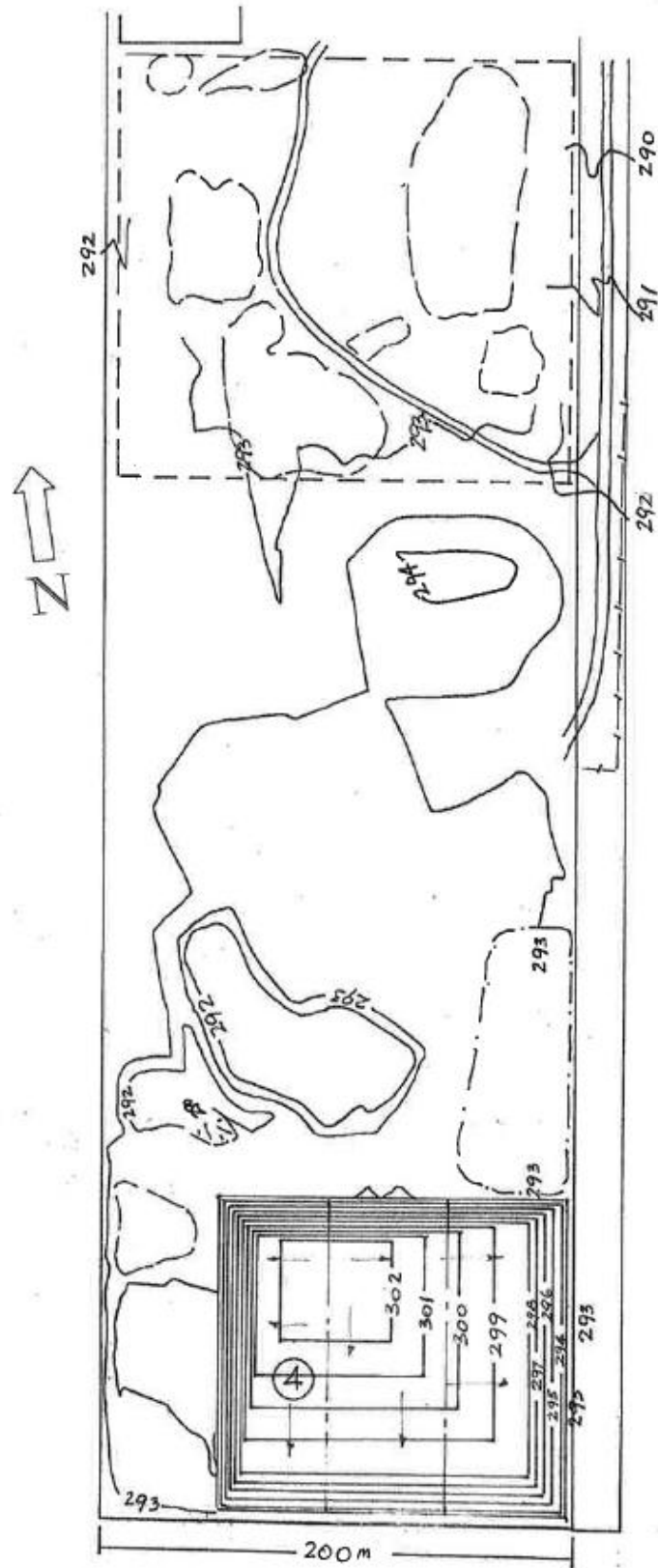
STAGE 3 FILLING PLAN

FIGURE 5

DURING CONSTRUCTION OF THE STAGE 3 WASTE LANDFORM THE EXISTING TEMPORARY SOIL BUND AT THE STAGE 2 INTERFACE SHOULD BE REMOVED AS SHOWN ON FIG. 13

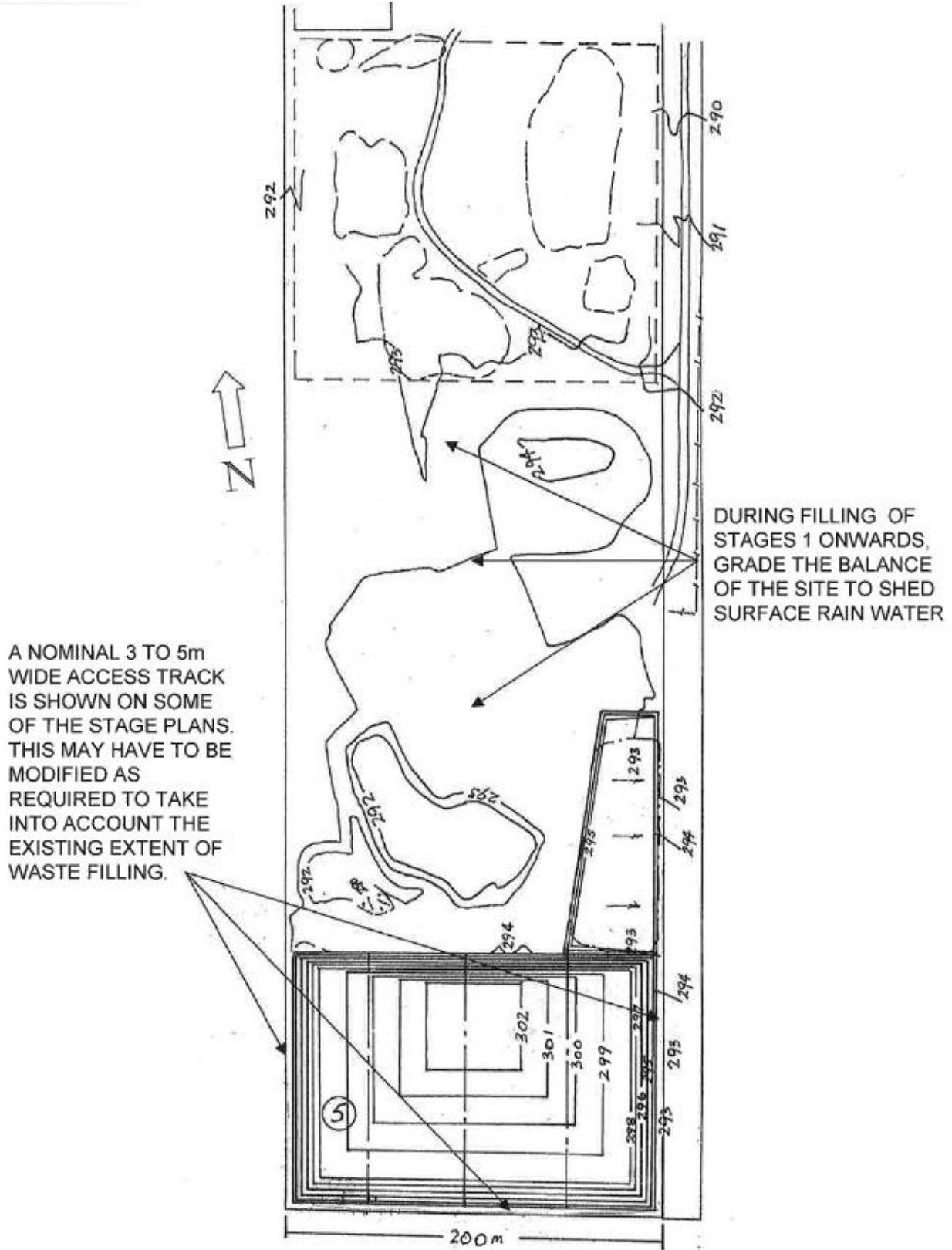


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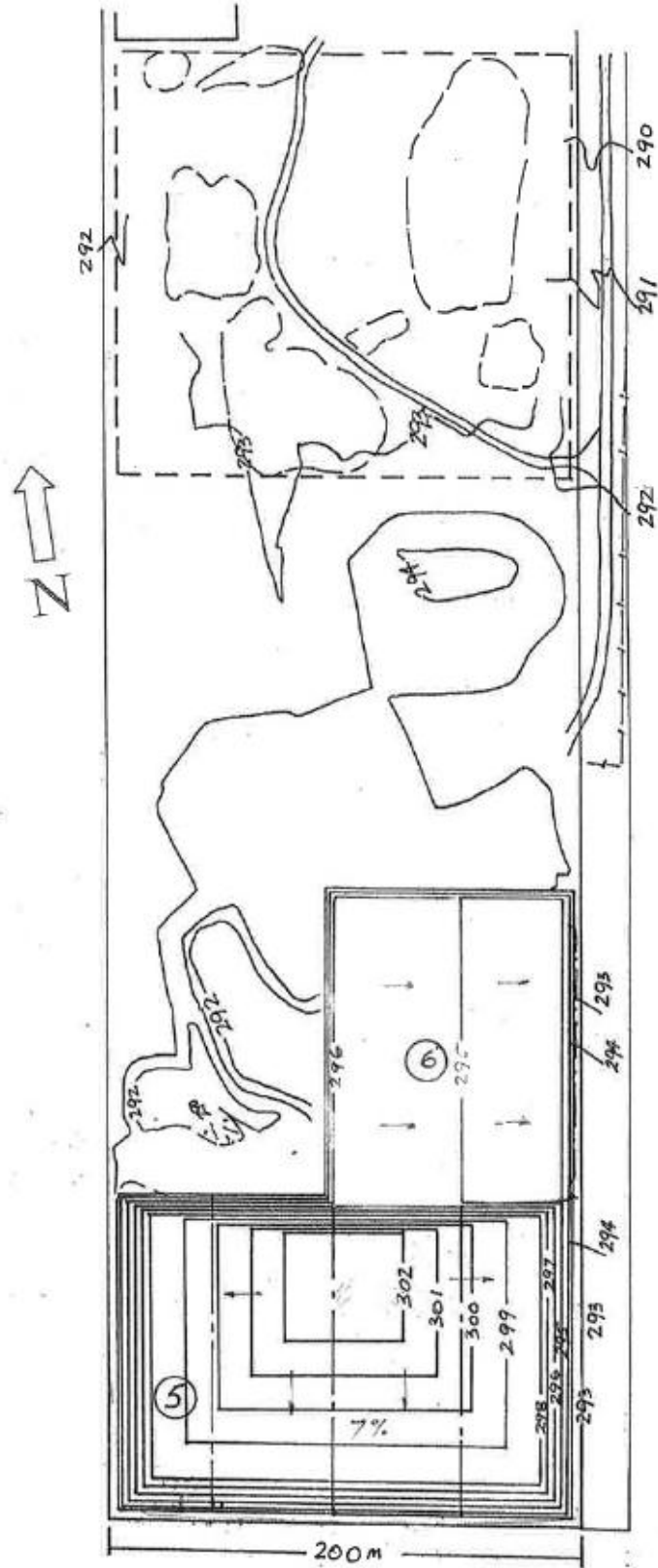


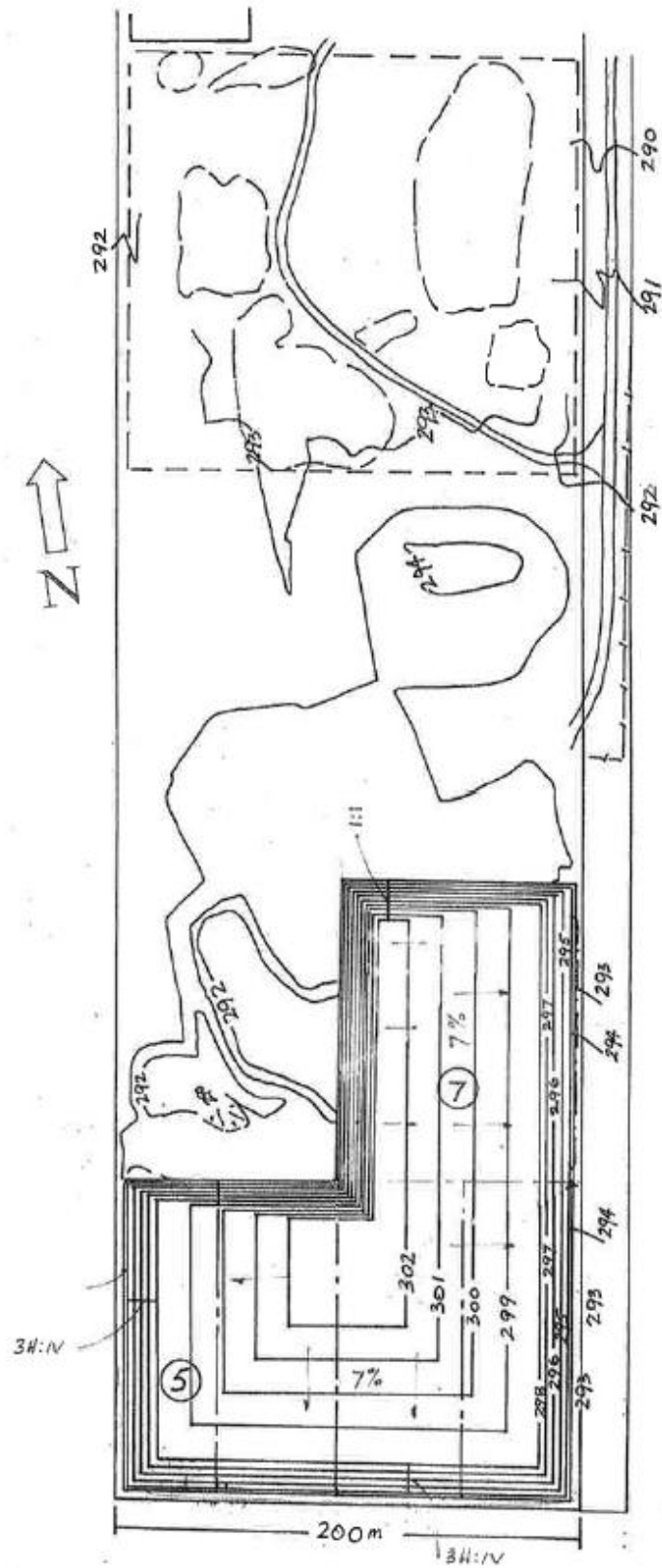
STAGE 5 FILLING PLAN

FIGURE 7

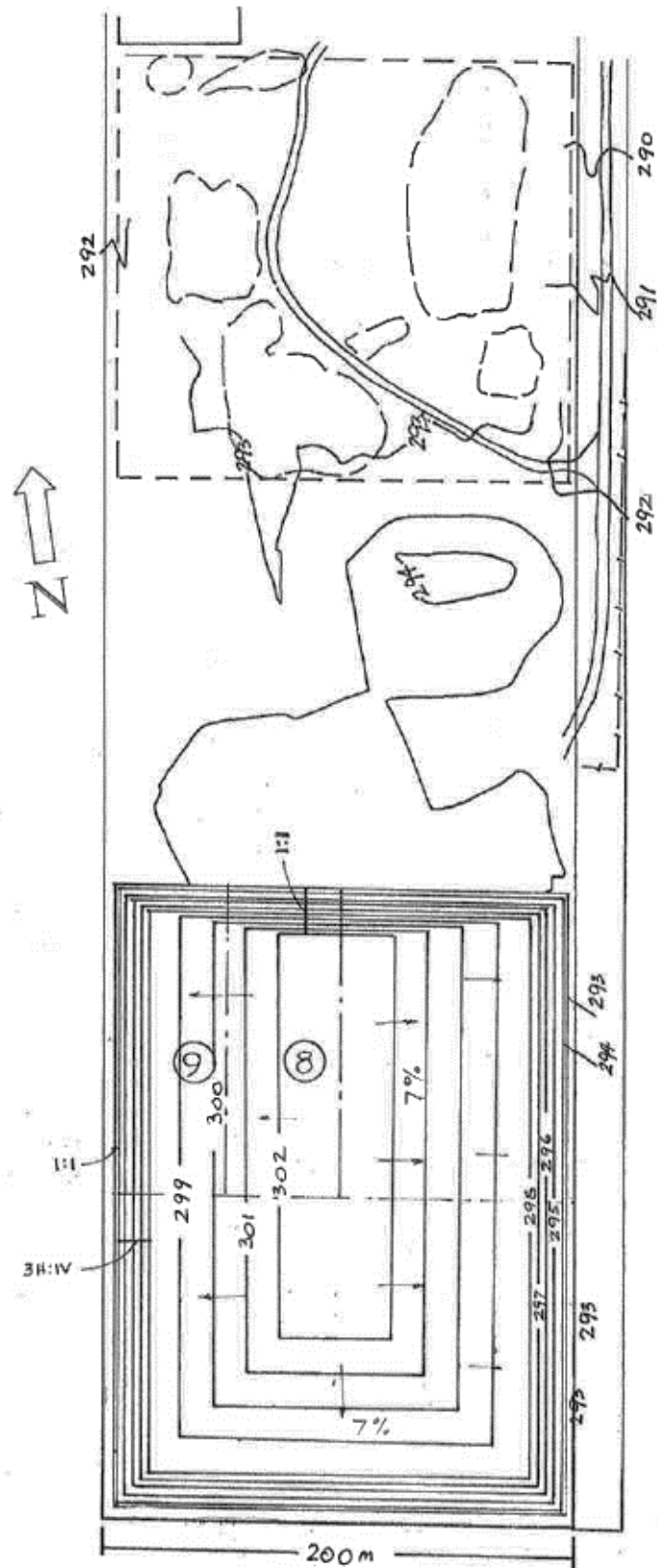


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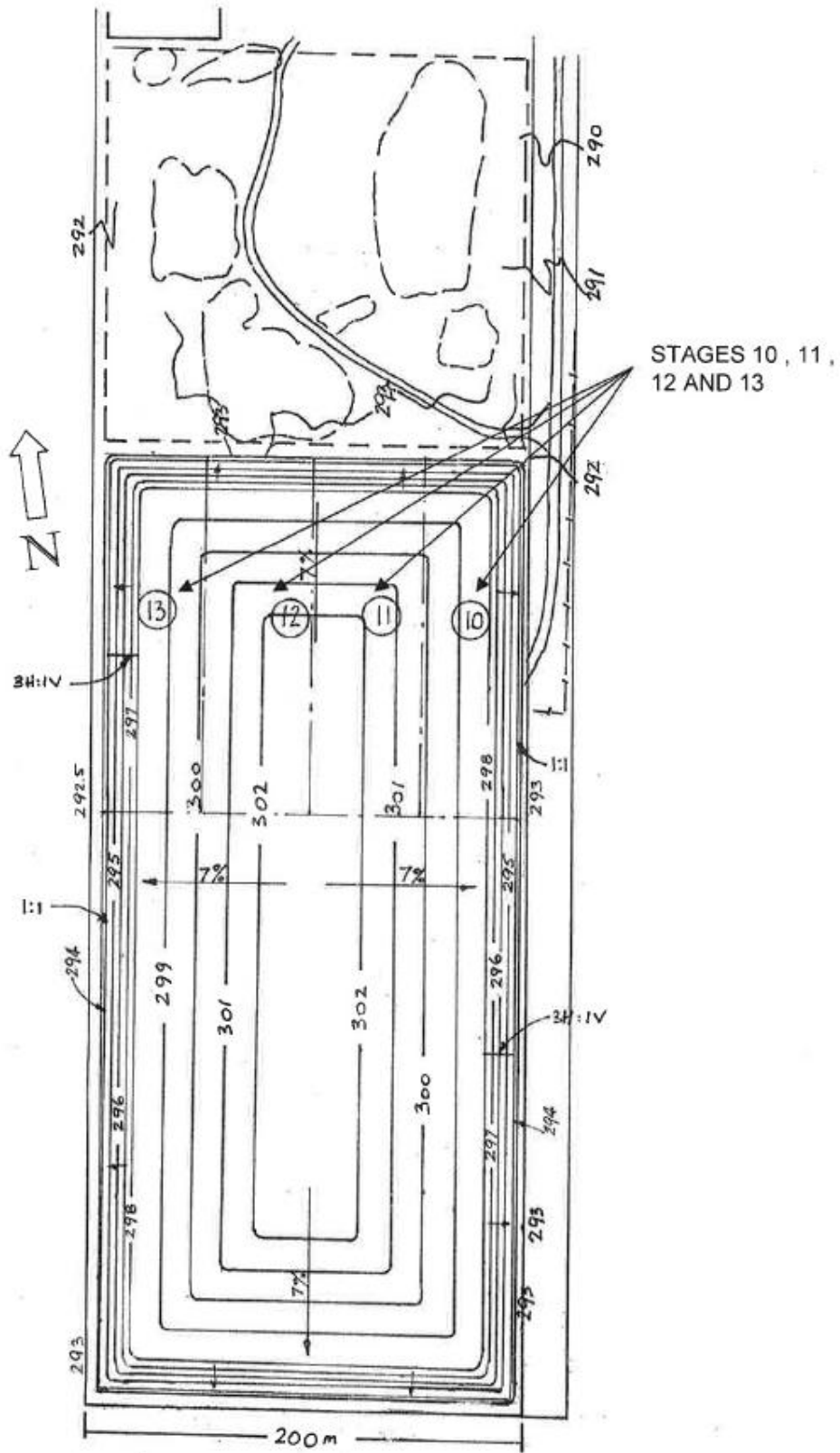




AMARAL

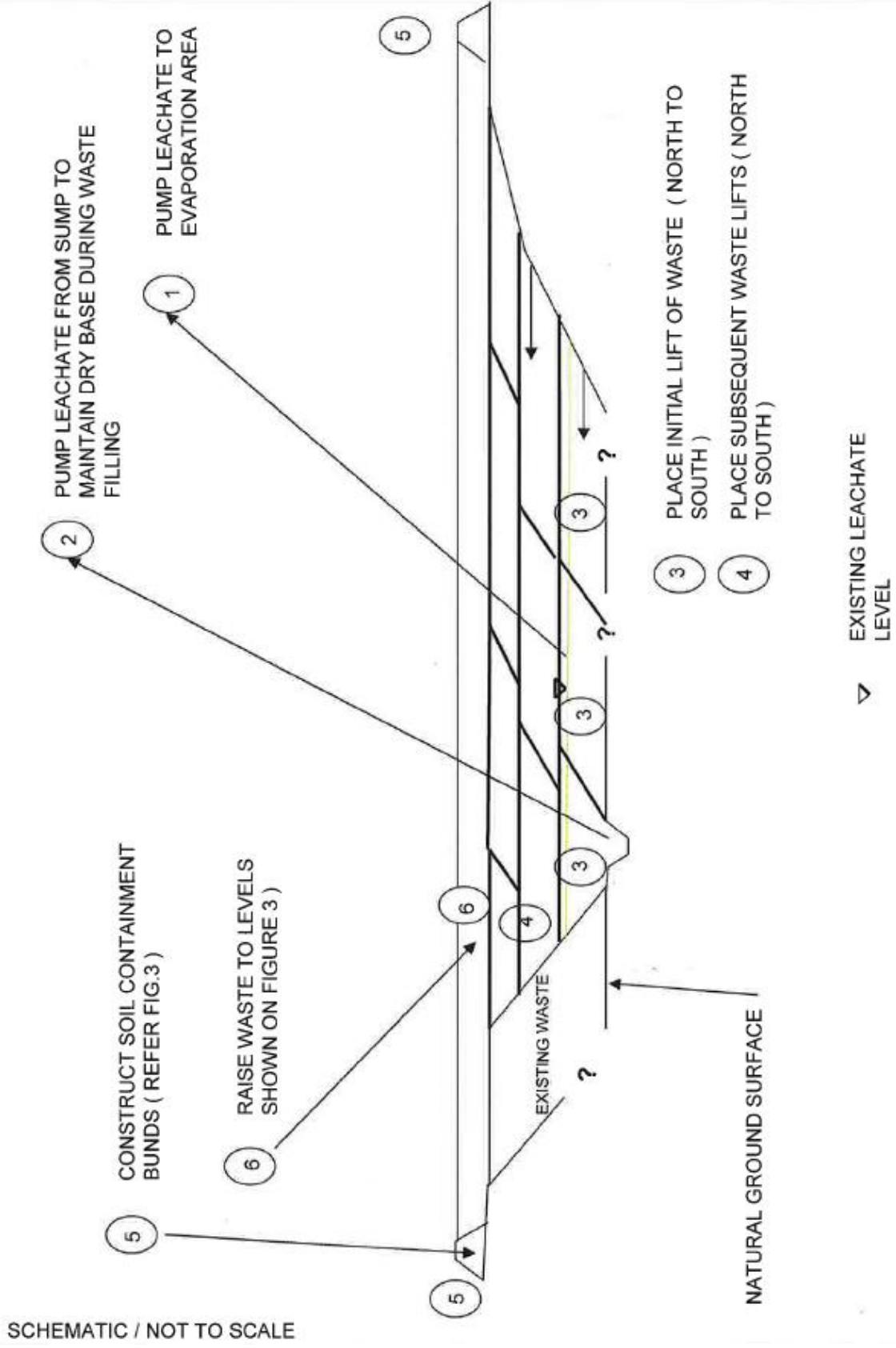


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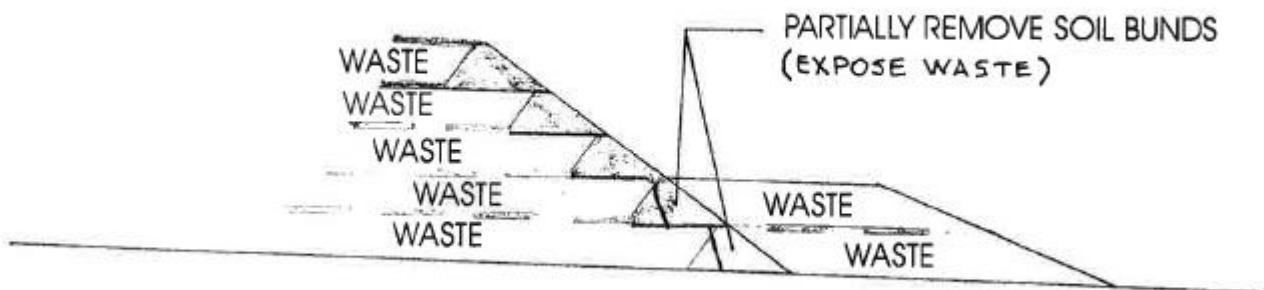


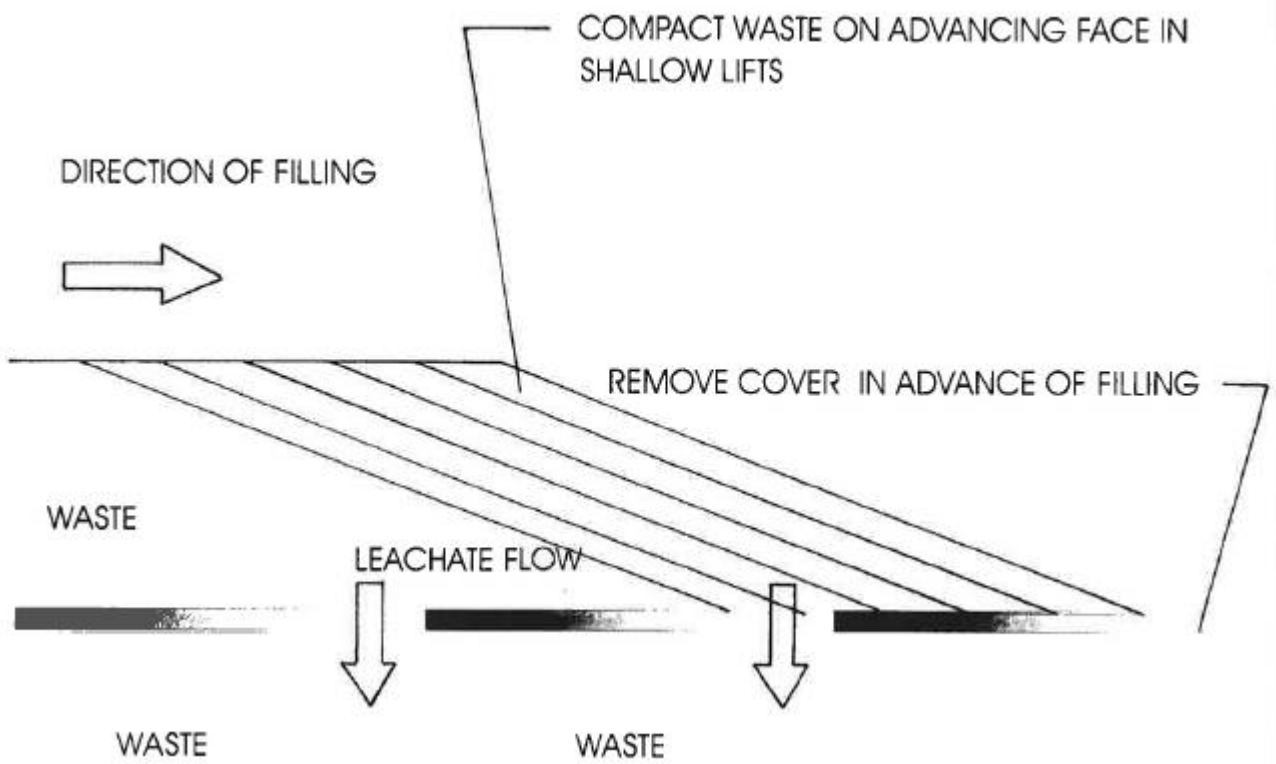
SECTION A - A

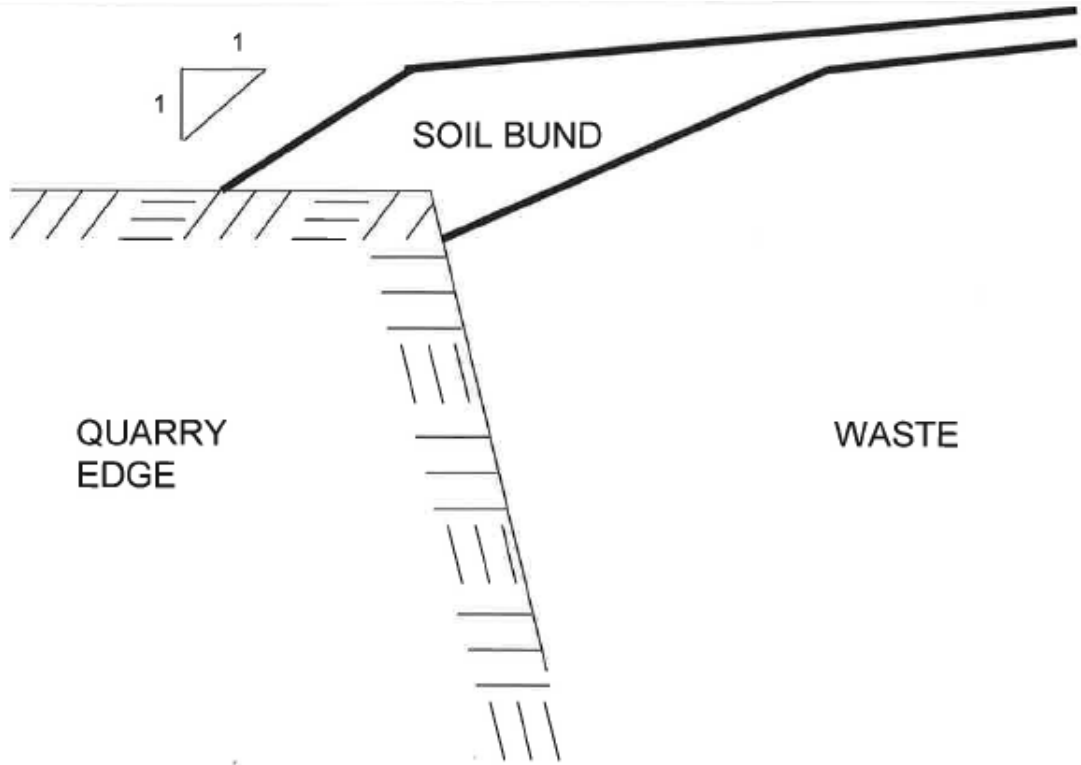
FIGURE 12



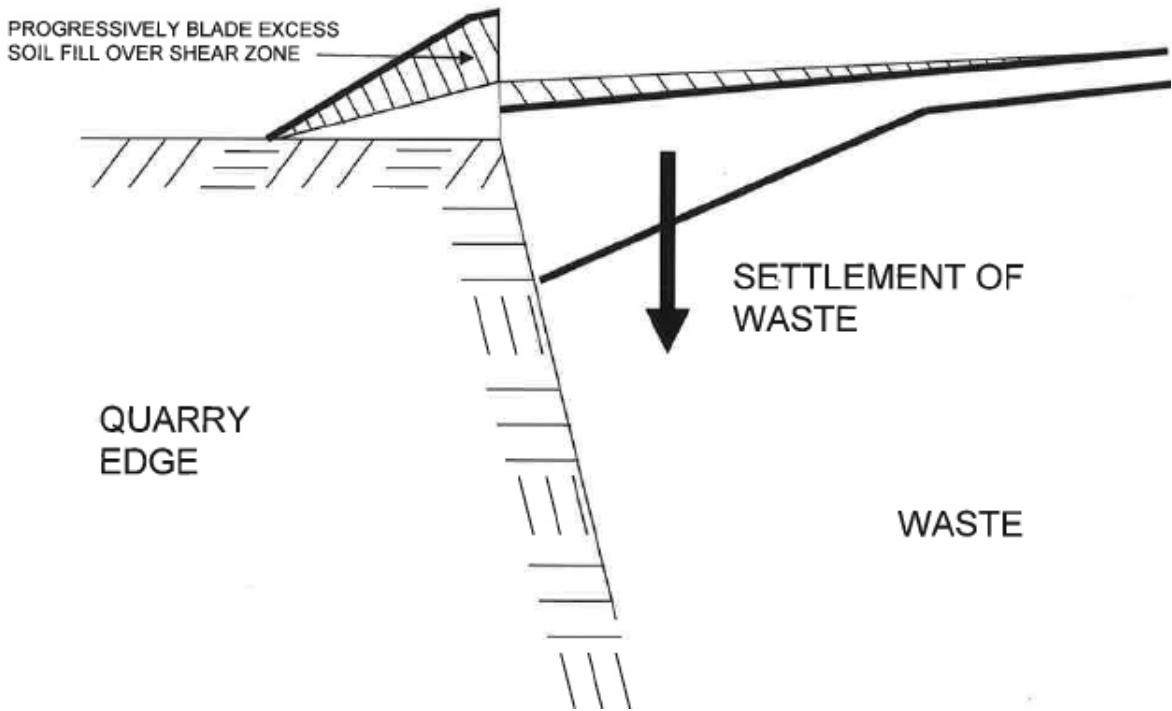
AMARAL



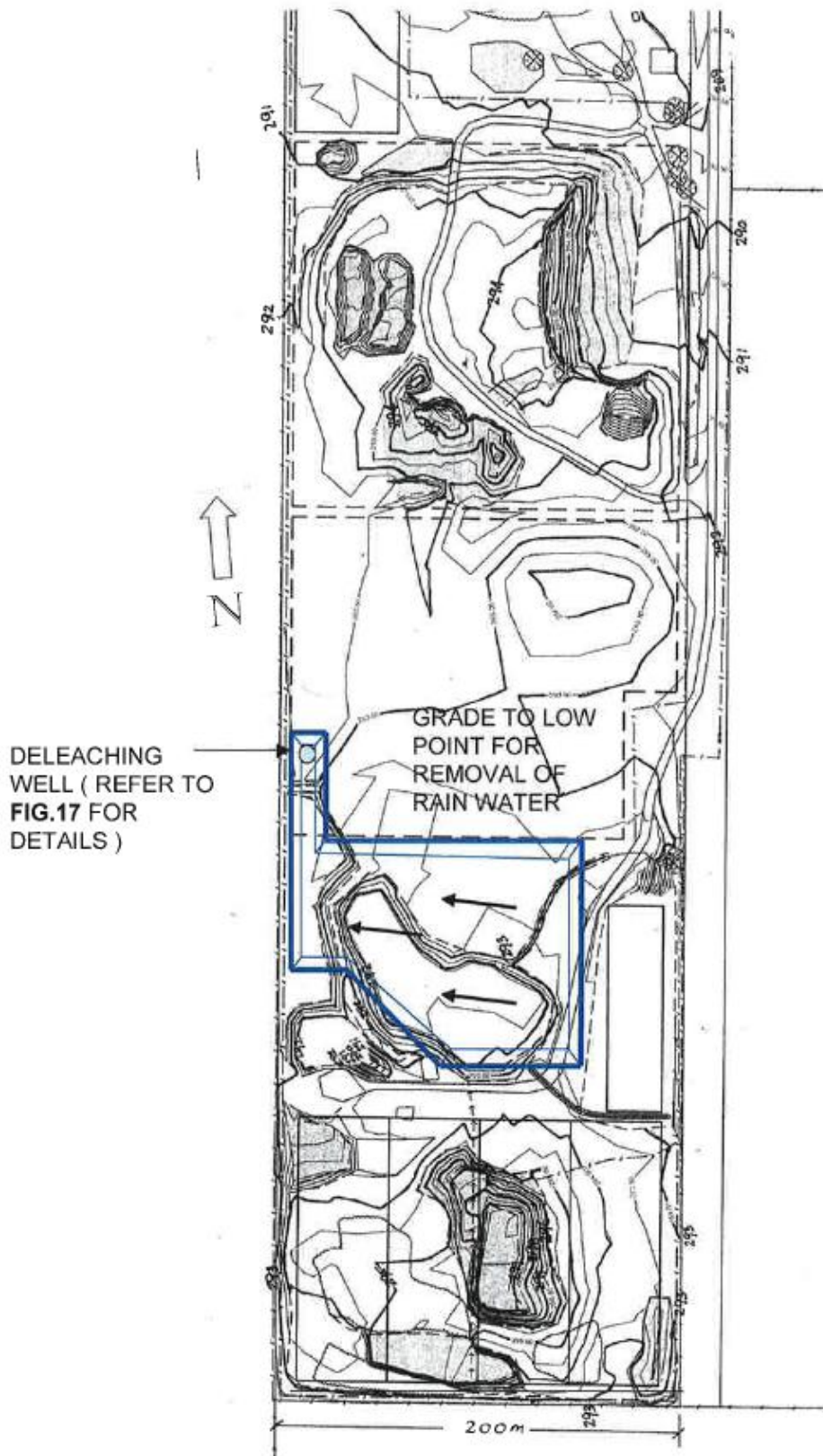




SECTION – AT COMPLETION OF FILLING AND CAPPING

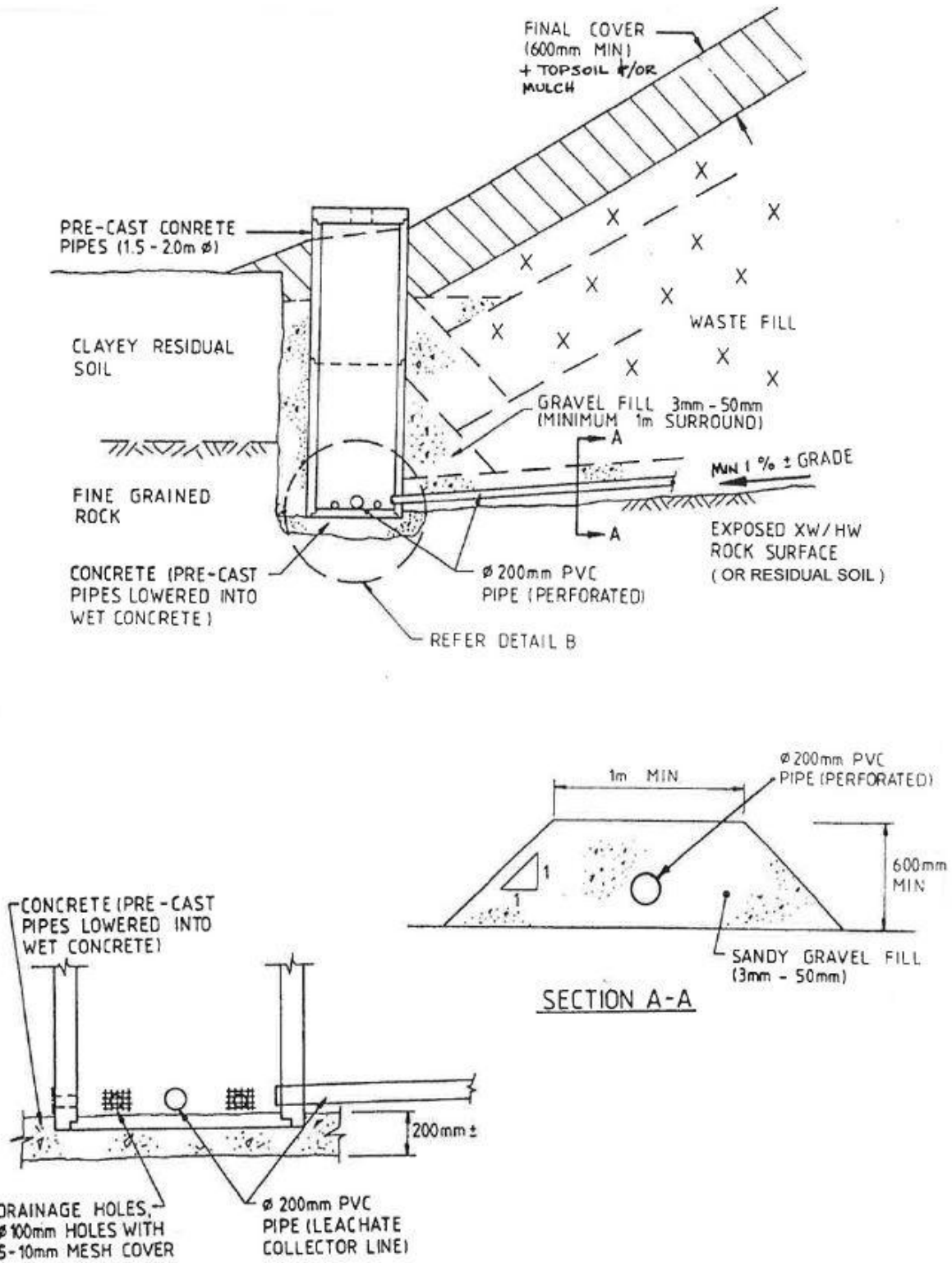


SECTION – AFTER SETTLEMENT (10 – 20% OF WASTE DEPTH)



DELEACHING WELL DETAILS

FIGURE 17



DETAIL B

SCHEMATIC / NOT TO SCALE

AMARAL

Appendix 3: Protection of the Environment Operations (Waste) Regulation 2014

80 Disposal of asbestos waste

(cf clause 42(4) of 2005 Reg)

(1) (Repealed)

(2) When a person delivers asbestos waste to a landfill site, the person must inform the occupier of the landfill site that the waste contains asbestos.

(3) The following persons must ensure that when a person unloads or disposes of asbestos waste at a landfill site (regardless of whether the site is subject to an environment protection licence) no dust is generated from the waste—

(a) the person unloading or disposing of the asbestos waste,

(b) the occupier of the landfill site.

(4) Subject to any alternative cover conditions provided in an environment protection licence held by the occupier or approved in writing by the EPA, the occupier of a landfill site must ensure that asbestos waste disposed of at the site is covered with virgin excavated natural material—

(a) initially (at the time of disposal), to a depth of at least 0.15 metre, and

(b) at the end of each day's operation, to a depth of at least 0.5 metre, and

(c) finally, to a depth of at least 1 metre (in the case of bonded asbestos material or asbestos-contaminated soils) or 3 metres (in the case of friable asbestos material) beneath the final land surface of the landfill site.

(5) In this clause, **landfill site** means a landfill site that can lawfully receive asbestos waste.

Appendix 4: Letter of Support EPA



DOC21/548280

Gilgandra Shire Council
ABN 47 979 060 715
By email at: council@gilgandra.nsw.gov.au

Attention: Mr Lindsay Mathieson

1 July 2021

Dear Mr Mathieson

Environment Protection Licence 12069 Draft Licence Variation Notice

I refer to your email to the Environment Protection Authority (EPA) dated 8 June 2021 providing and requesting support for the proposed Long Term Plan of Management (LTPoM) for Gilgandra Shire Councils (Council) solid waste and encompassing the Waste Tyre Facility at 370 Arthursleigh Lane, Gilgandra, NSW, 2827 (Premises) to which environment protection licence 12069 (Licence) applies.

The EPA has reviewed and supports the proposed LTPoM. The EPA is proposing to vary the Licence to permit the processing of the tyres by shredding and disposing of the waste at facility lawfully able to receive that waste. The EPA also understand that Council will be working towards rehabilitating the Premises and surrendering the Licence. The EPA has also taken this opportunity to make a number of other changes to the Licence.

A copy of the Draft Licence Variation Notice No. 1609511 is enclosed. Can you please review the attached Draft Notice, compare it to the existing in-force version of the Licence and provide any comments to the EPA by email at central.west@epa.nsw.gov.au as soon as possible and by no later than 5pm on 16 July 2021. If no comments are received by this date and time, the EPA may finalise and issue the Draft Notice without further change. You may also use this opportunity to comment on any other aspects of the Licence.

If you have any questions regarding this matter, please contact Joshua Loxley on (02) 6883 5326 or by e-mail to central.west@epa.nsw.gov.au.

Yours sincerely

MATTHEW CORRADIN
Unit Head
Regulatory Operations

Phone 131 555	TTY 133 677	PO Box 2111	L1, 48-52 Wingewarra Street	info@epa.nsw.gov.au
Phone +61 2 6883 5333	ABN 43 692 285 758	DUBBO NSW 2830 Australia	DUBBO NSW 2830 Australia	www.epa.nsw.gov.au