PART 3: SCOPE OF WORK

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C3.1: EMPLOYER'S SCOPE

Contents

1 Description of the *services*

1.1 Executive overview

Arnot Power Station requires a consultant to render professional services to establish safety norms pertaining to the design, construction, monitoring, operation, performance and maintenance of the dam satisfy acceptable dam engineering practices. This will include a yearly inspection of all the dams with a safety risk as per Arnot Power Station's IWULA and inspections as per Dams Safety Officer.

Furthermore, provide training and skills transfer to the Eskom candidate civil engineer through a supervisory role which includes, offer expert advice, review conducted investigations on technical and operational incidents, give advice on emanating issues, review updates to the operations and maintenance manual, and review reports with recommendation. The consultant must be in possession of Professional Registration in Civil Engineer with ECSA and must be an Approved Professional Person with DWS Dam Safety Office.

Also included is the required aerial survey of the ash dams, determining the 50 and 100-year flood levels for several dams, drawing as-built drawings, registration of the ash dam and slope stability analysis.

A dam break analysis is done for the Ash dam complex, Station Drains Dam and the Stockpile Runoff Dam (Schoeman dam). This includes maps showing the affected areas.

A need may arise where the APP, professional civil engineer or any other consultant must come to site for an assessment, to make recommendations and to compile and issue reports, letters or other technical documents.

1.2 Interpretation and terminology

The following abbreviations are used in this Scope:

Abbreviation	Meaning given to the abbreviation
APP	Approved Professional Person
AWR	Ash Water Return
AWRD	Ash Water Return Dam
DWS	Department of Water and Sanitation
ECM	Engineering Change Management Procedure
ECSA	Engineering Council of South Africa
ERI	Eskom Rotek Industries
IWUL	Integrated Water Use Licence
O&M	Operational and Maintenance Manual
SACPCMP	South African Council for Project and Construction Management Professionals
SANS	South African National Standards
SHEQ	Safety Health Environmental Quality

2 Specification and description of the *service*s

2.1 Description of various dams

Arnot Power Station has 6 dam complexes in and around the station. These are:

2.1.1 Station's Drains

The Station Drains are situated on the North Western side of the station. The Station Drains ponds (dams) house polluted water. The polluted water originate from underground drain tunnels in and around the Power Station. About 50% of the stormwater also enters these dams having run over dirty areas. The rest is diverted directly to the environment and do not form part of the Station Drains i.e. Clean surface runoff emanating from the switch yard is diverted along the southern perimeter of the dam through a pipe culvert to be discharged downstream of the dam wall.

2.1.2 Sewage Plant Maturation Ponds

There are three maturation ponds. The water enters the 1st pond at the one end and is allowed to flow through the entire length of the pond and the 1st pond outlet is also the 2nd ponds inlet and the same for pond no3. The ponds are situated on the south of the Sewage Plant and serves as third stage processing, processing effluent from the bio filter and secondary treatment for the polishing of the final effluent. An Aerobic environment is created on the ponds. Typically the embankment slopes of the ponds range from 1:3 and 1:4 and should be kept clean to avoid breeding of mosquitoes. These dams are not often used.

2.1.3 Ash Dams and AWR Low Level dams

The ash disposal facility, Ash Dam, is situated approximately 1,5 km to the south-east of the Power Station in the Rietkuilspruit valley between 25°57' and 25°59' South and 29°47' and 29°49' East. The ash dam complex (including the silt trap and the ash water return dams) covers a total area of approximately 200 hectares.

The site was chosen because of the absence of major coal deposits in the immediate area. The dam was constructed between and across the upper tributaries of the Rietkuilspruit. The two tributaries were diverted to make the site suitable for ashing. These diversions form part of the complex and responsibility of the *Consultant.*

The following design parameters are applicable to the ash disposal facility:

Bulk density of deposited ash	1.5 ton/m3
Dry density of deposited ash	0.95 ton/m3
Approximate ash to water ratio by mass for fly ash slurry	1:4 to 1:7
Approximate ash to water ratio by mass for coarse ash slurry	1:4 to 1:7
Quality of ash water for release into a public stream	unsuitable
Maximum design elevation of ash dams	1706 m.a.m.s.l
Percentage ash from coal burnt	24 - 30%

Due to the size and life expectancy of the ash dam, the civil works have been split into three phases. This has had the advantage of postponing capital expenditure and allowed the performance of the dam to be monitored in the interim.

Phase One - Ash Dam 1
There is no information available on the original design of Ash Dam 1 and many assumptions therefore have to be made.

The original ash dam, Ash Dam 1, was constructed on the north western portion of the ash disposal facility complex. The dam was constructed to a maximum height of 32 m, on its southern side. During this time an ash terrace was constructed to the south and east of the Ash Dam 1, on which the Ash Water Return Dams were established. The terrace was later also used as a "starter platform" for Ash Dam 2.

Ash deposition on Ash Dam 1 was reduced early in 1990 and eventually stopped in April 1992 to allow the construction of Ash Dam 2. Flamingo pan construction commenced during 1996 and developed to the stage that its height is currently above that of ash dam 2.

Ash dam 1 was re-commissioned during 2001 to reduce the rate of rise on Flamingo pan and ash dam 2. This was done in preparation of the planned filter drain installation.

Research by Megawatt Park led to the final decision that filter drains does not contribute to the dam stability and therefore does not warrant this expenditure. During the beginning of 2003 it was decided in Arnot Technical Forum not to install filter drains but rather to reduce the wall slope. Ash deposition on dam 1 has been reduced to the absolute minimum at the end of 2004 with only occasional depositions taking place to reduce dust and to cater for blocked ash deposition lines at the other areas. Deposition on Flamingo pan and dam 2 is currently the main focus areas of the ash dam complex. This has now become more common due to the availability of ash lines.

Phase Two - Ash Dam 2
Construction of the second phase of the ash disposal facility, ash dam 2, began in 1989 with the installation of a main filter drainage system, followed by the construction of starter walls. The main filter drains were installed behind the day wall on the original ash terrace.

Unfortunately, the addition of Ash Dam 2 to the ash disposal facility has resulted in the ash dam complex becoming elongated and irregular in plan. This has resulted in a higher perimeter to stored volume ratio with the consequent higher associated wall building costs than for the more regular shaped ash dam.

The irregular shape of the combined dam complex will make it more difficult to control the position of the pool of water on top of the ash dams. However, both these negative factors may be mitigated by means of "rationalization" of the perimeter walls and the correct location of any new penstock inlet.

During 1996 a permanent penstock was installed on ash dam 2, situated in the far western side about 50 meters east of dam 1. This penstock has two inflows that cater for better inflow control. One of the inflows has since been blocked off. The old penstock was sealed during 1998 when the new facility was put into service. This penstock has also blocked and a new penstock project is now underway with the designs completed.

Phase Three - Flamingo Pan
Initially the third phase, ashing into Flamingo Pan would only have had to come into operation if Dam 1 and Dam 2 did not have sufficient capacity to cater for the operating life of the power station. It has since been decided that the area provided by Flamingo Pan will be required for ashing. Ash was deposited into Flamingo Pan in order to fill the Pan up to the natural ground level. Daywall construction started during 2000 on this complex and will continue until it reached the same height as dam 1 where after it will be operated as one complex.

2.1.3.1 AWR Low Level Dams

AWRD 1 collects water from the penstocks on the ash dams. The optimum operating level of the dam must however remain at 2m, i.e. at a level of 1633,5 m.a.m.s.l. The water level is therefore to be kept as close to 1633,5 m.a.m.s.l during normal operating conditions as possible. This will allow an extra emergency capacity of 0,8m plus the minimum required freeboard of 0,8m. The water level in the dam is controlled by means of a penstock outlet. Water from this dam is decanted into either AWRD 2A or 2B.

The prime objectives of the operation of the AWRD 1 is:

- To prevent spillage of polluted water into the natural environment.
- To have sufficient storage capacity for stormwater runoff from large storms.
- To minimize the need for make-up water for ashing at the station by having sufficient water in the ash water return dam.

AWRD 2A or 2B in turn provides suction to the AWR pumps and thus need to be full in order to provide maximum suction head. These pumps provide water to the AWR High Level Dams.

2.1.4 AWR High Level Dams

There are 4 AWR High Level dams. They gravity feed into the station. They provide ashing water to various pumps inside the station. This water will transport more ash to the ash dam complex. This is a closed system to ensure that polluted water does not enter the ground or river courses.

2.1.5 Raw Water Reservoirs

The source for the station's raw water is the Komati River via three catchment's dams along the river, Nooitgedaght Dam, Bosloop Weir and Vygeboom dam. From these the water is pumped to the two buffer dams or reservoirs. The formation of Arnot Power Station Raw Water dam is a natural depression on the ground (Pan) with a constructed dividing wall separating the dam into two equal halves. The dam has a combined storage capacity of ± 100 Million Gallons (about 380Ml) volume of water. The dividing wall is a three part wall, the clay inner core with a slope of 1:0,5 compacted to 90% MOD AASHO Density, a fill material on either side of the inner core compacted to 95% MOD AASHO and the outer layer comprises of crusher run stone, 2" rolled to form a tight 6" layer similar to road base material. On the Eastern side of the dam are two control towers situated on either side of the divisional wall.

2.1.6 Coal Stock Yard Dam

The pollution control dams collect water from the drainage system of the coal stockyard that is conveyed to the dams by means a trench (snake trench). These dams are a collection of two earth-filled ponds and one earth-filled dam. The first two pond are silt traps, where most of the suspended particles are allowed to settle before inflowing to the third final dam where water is recovered to the Station Drains Dams. These dams are found outside the station next to the Mafube conveyor belt from the mine.

2.2 The duties and responsibilities will include but not limited to the following:

2.2.1 Commissioning of AWR dam 4

AWR dam 4 has not been commissioned. The dam was constructed by BKS and the designs done by AECOM. The *Contractor* commissions this dam according to the current laws and regulations. It is recommended that AECOM be used for this activity, because they have a full history of the dam. The engineer involved was Danie Badenhorst. The commissioning includes all necessary correspondence with the relevant government bodies.

2.2.2 Drawings

The *Consultant* provides all drawings in Micro-Station V8i. If the *Consultant* cannot deliver the drawings on Micro-Station V8i, they can use the following design software:

- AutoCAD Inventor Professional 2018 - 2020
- AutoCAD Mechanical 2014 – 2020

All drawings has an Eskom title block, which includes Eskom's logo on it, as provided. All the drawings are Soft Copy. The *Consultant* requests drawing numbers from the *Client.*

2.2.3 Designs

The *Consultant* provides all design calculations to the *Employer* for record keeping in line with Arnot's current water use license.

2.2.4 Survey and drawing of as-built drawings

The *Consultant* draws as-built drawings for the Coal Stockpile Pollution Control Dam (Schoeman dam), River Diversion next to the ash dam, Final Station Drains Dam, Buffer dam, AWR Low Level Dams, AWR High Level, the river diversion next to the ash dam (which includes the road crossing) and the road crossing at the Ash Dam.

The drawings include the capacity of each dam with and without the required 0,8m freeboard.

2.2.5 Design for the road crossing

The *Consultant* provides supervision for the design of the road crossing.

2.2.6 Flood lines and dam break study

The *Consultant* establishes 1:50 and 1:100 year flood lines for Arnot Power station.

The *Consultant* indicates wet lands on the drawings and delineates these on site with wooden poles marked in yellow and orange.

2.2.7 Dam break study

The *Consultant* does dam break studies for the following areas:

- Coal Stockpile Pollution Control Dams
- Ash Dam Complex which includes the AWR Low Level Dams
- Final Station Drains Dam
- Buffer Dam

2.2.8 Dam safety inspection

The *Consultant* performs an annual dam safety inspection on the Coal Stockyard Pollution Control Dam.

2.2.9 Supervisory role of the Coal Stockyard Pollution Control Dam and Ash Dam

The *Consultant* provides a Professional Civil Engineer that performs the function of supervisor on the Coal Stockyard Pollution Control Dam and Ash Dam as envisaged in Arnot's Internal Water Use License.

The *Consultant* also provides the supervisory role for the candidate engineer on the dams for one day per month on a monthly basis.

2.2.10 Pollution Plume

The *Consultant* reviews the pollution reports from the bore hole monitoring and creates a ground water pollution plume.

2.2.11 Designs for the lining of the Coal Stockyard Pollution Control Dam, Final Station Drains Dam, AWR Low level and AWR High Level Dam 1, 2 and 3

The *Consultant* provides design drawings for the lining and seepage cut-off system required on the Coal Stockyard Pollution Control Dam (which includes the snake trench), Final Station Drains Dam, AWR Low Level Dams and AWR H/L dams.

The designs allow the settling ponds and snake trench of the Coal Stockyard Pollution Control Dams to be lined with concrete to allow regular cleaning with an excavator. The Coal Stockyard Pollution Control Dam, AWR High Level Dam 1, 2, and 3, Final Station Drains Dam, AWR Low Level dam 1, 2a and 2b is lined with a geo-membrane and rip-rap system. The design evaluates the need and designs a seepage cut-off system.

2.2.12 Ash Dams

- The *Consultant* must take full responsibility of reporting on Arnot Power Station Ash dam river diversion, river crossing and Ash dam 1, 2 and flamingo pan as described in SANS 0286: 1998.
- The *Consultant* does an aerial survey annually. From this, the *Consultant* does a rate of rise study, life expectancy study and determines the current and maximum possible amount of water that can be stored on the facility. The *Consultant* reviews the current life cycle plan of the Ash Dam and develop an operational strategy in terms of the capacity and rate of rise of the ash dam.
- Review the deposition plan of ERI and influence it to be in-line with the life cycle plan.
- The *Consultant* does an annual dam safety inspection.
- The *Consultant* registers the dam as a dam with a safety risk, pending his findings in the dam safety inspection.
- The consultant must take full responsibility for reporting on the safe operation of the Ash water return dams 1, 2, 3 and 4 and river diversion at the toe of the dam.
- The *Consultant* must provide ongoing guidance to Arnot Power Station on requirements of SANS 0286, to ensure compliance at all aspects and keep up to date with Dam Safety Office regulations.
- Conduct monthly inspection at the ash dams and chair the meeting to discuss the operation and maintenance of the ash dams.
- Prepares monthly inspections reports based on the study of the monthly report generated by the ash dam contractor.

- Performs an annual slope stability analysis, after the aerial survey, to quantify the risks on the ash dams and advice the employer on safety risks and environmental risks with recommendations.
- Performs a once off geo-technical evaluation to enable the slope stability analysis. Provides all reports for this evaluation. This includes executing the necessary geotechnical testing in order to quantify the strength parameters of the ash.
- Ensure that the ash dam's structural integrity is not compromised in any way by any action.
- Provide advice on any actions deemed necessary to ensure the long-term health of the ash dam and all other dams.
- Develop and assist in an overall operational strategy to coordinate activities between engineering, maintenance and operating functions by updating the Operations and Maintenance manual every 2nd year. This update to the operations and maintenance manual to ensure that the ash dam contractor work to the latest changes in the ash dam operation requirements.
- Develop implementation strategies in the context of how to fix defects and potential defects for ash dams and other dams
- Review all existing emergency procedures after the updated based on the dam break studies and recommend the required changes that is identified.
- When required to do investigations with recommendations to improve the operation of the Ash Dam.
- To monitor the rate of rise as well as the capacity of the Ash Dam and to submit 4 monthly reports.
- Analyse the current and future ash line configuration around the ash dam and to do recommendations. Produce a line diagram for these new lines, which includes proposed deposition points.
- Assess distress signs such as cracking, wet spots on the downstream face, and critical settlement
- Provide supervision for the Candidate Eskom engineer in line with Eskom's ECM process.

2.2.12.1 Borrow pit and roads around the dam

The *Consultant* supplies a generic design for the roads on the ash dam. The design includes the road for the planned 14m step-in and includes the layout of the new 14m step-in and a dirty water channel.

The *Consultant* identifies a location for a borrow pit to supply material for the required road construction and rehabilitation of the sides slopes of the ash dam. The *Consultant* estimates the required quantities required from the borrow pit.

2.2.12.2 New design of dirty water channel

The dirty water channel is a concrete channel that runs on the north and east of the ash dam complex. This channel has reached the end of its life. A section of the channel is also not lined. The south and west does not have a concrete channel. This channel captures seepage and water from the toe drains.

The *Consultant* provides supervision for the designs and drawings to replace the dirty water channel. The *Consultant* also provides supervision for the designs for new channels on the south and west. The *Consultant* provides supervision for the design of an additional new channel on the slope of the dam to ensure that the dirty channel does not become excessively large.

2.2.12.3 Additional drains

The *Consultant* provides supervision for the designs of a new drain system for the ash dam complex. The drains have two functions. To lower the phreatic level in the dam and to reduce ground water pollution. The *Consultant* evaluates the current piezometer readings and the current rate of rise of the complex.

2.2.12.4 Repairs to the river diversion

The *Consultant* provides supervision for the designs or relocation required to repair the river diversion.

3 Constraints on how the *Consultant* Provides the Services.

3.1 Regulations and policies

The *Consultant* must adhere to the following:

- Compliance with SHEQ Policy, Environmental Statement and Waste Water Management Plan
- Ensure all the facility are in compliance with GN 704 Regulation on Mining Water
- Compliance with Arnot's IWUL
- The South African National Standards
- All other legal requirements applicable

3.2 Management meetings

Regular meetings of a general nature may be convened and chaired by the *Employer's Agent* as and when required. Records of these meetings shall be submitted to the *Employer's Agent* by the person convening the meeting within five days of the meeting.

All meetings shall be recorded using minutes or a register prepared and circulated by the person who convened the meeting. Such minutes or register shall not be used for the purpose of confirming actions or instructions under the contract as these shall be done separately by the person identified in the *conditions of contract* to carry out such actions or instructions.

3.3 *Consultant*'s *key persons*

An organogram must be submitted to indicate lines of communication in line with the services provided.

3.4 Provision of bonds and guarantees

The form in which a bond or guarantee required by the *conditions of contract* (if any) is to be provided by the *Consultant* is given in Part 1 Agreements and Contract Data, document C1.3, Sureties.

The *Employer* may withhold payment of amounts due to the *Consultant* until the bond or guarantee required in terms of this contract has been received and accepted by the person notified to the *Consultant* by the *Employer's Agent* to receive and accept such bond or guarantee. Such withholding of payment due to the *Consultant* does not affect the *Employer*'s right to termination stated in this contract.

3.5 Documentation control and retention

3.5.1 Identification and communication

All contractual communications will be in the form of properly compiled letters or forms attached to emails and not as a message in the email itself. Any form of communication shall be directed to the *Employer's Agent* at all times.

3.5.2 Retention of documents

The Consultant retains copies of drawings, specifications, reports and other documents which record the services in the form stated in the Scope. Note the time period for which the Consultant is to retain such documents is the period for retention stated in the Contract Data.

Invoicing and payment

Clause 50.2 states invoices submitted by the *Consultant* include the details stated in the Scope to show how the amount due has been assessed.

The following details shall be shown on or attached to each Invoice to show how the amount due has been assessed:

The *Consultant* shall address the tax invoice to the *Employer* using the following email address: **invoiceseskomlocal@eskom.co.za** and include on it the following information:

- Name and address of the *Consultant* and the *Employer's Agent;*
- The contract number and title;
- *Consultant's* VAT registration number;
- The *Employer*'s VAT registration number 4740101508;
- Total amount invoiced excluding VAT, the VAT and the invoiced amount including VAT;
- (add other as required)

3.6 Quality management

3.6.1 System requirements

Clause 40.1 requires that the Consultant operate a quality management system as stated in the Scope.

3.6.2 Information in the quality plan

Clause 40.2 requires that the Consultant provide a quality policy statement and quality plan which complies with requirements stated in the Scope.

3.7 The Parties use of material provided by the *Consultant*

3.7.1 *Employer*'s purpose for the material

Clause 70.1 states that the Employer has the right to use the material provided by the Consultant for the purpose stated in the Scope.

3.8 Health and safety

The *Consultant* shall at all times comply with the health and safety requirements prescribed by law as they may apply to the *service*s.

Compliance to 5 identified lifesaving rules (Compulsory Adherence):

Rule1: Open, Isolate, Test, Earth, Bond, and/or Insulate before touch
(That is, any plant operating above 1 000 V)
No person may work on any electrical network unless:
- He/she is trained and authorised as competent for the task to be done;
- A pre-task risk assessment to identify all risks and hazards has been conducted prior to any work commencing;
- An equipotential zone is created for each worker on the job site by earthling, bonding, and/or insulating according to approved procedures;
- All conducting material is connected together, all staff on site wear electrical safety shoes, and insulating techniques are applied according to standards; and
- The authorised person (team leader) has certified and shown all team members that the apparatus is safe to work on.

Rule 2: Hook up on heights
Working at height is defined as any work performed above a stable work surface or where a person puts himself/herself in a position where he/she exposes himself/herself to a fall from or into.

No person may work at height where there is a risk of falling unless:
- A pre-task risk assessment to identify all risks and hazards has been conducted prior to commencing any work at height;
- He/she is appropriately trained;
- He/she is appropriately secured during ascending and descending; and
- He/she is using an approved fall arrest system where applicable.

Rule 3: Buckle up
No person may drive any vehicle on Eskom business and/or on Eskom premises:
- Unless the driver and all passengers are wearing seat belts.

Rule 4: Be Sober
No person is allowed to work under the influence of drugs and alcohol.
"Under the influence" means the use of alcohol, drugs, and/or a controlled substance to the extent that:
- His individual faculties are in any way impaired by the consumption or use of the substances; or
- The individual is unable to perform in a safe, productive manner; or
- The individual has a level of any such substance in his/her body that corresponds to or exceeds accepted medical/legal standards; or
- The individual has a level of alcohol in his/her body that is greater than 0% blood alcohol concentration.

This includes any level of an illegal substance in the body, irrespective of when the substance was used.

Rule 5: Ensure that you have a permit to work
Where an authorisation limitation exists, no person shall work without the required Permit to Work (PTW), which is governed by the Plant Safety Regulations, Operating Regulations for High Voltage Systems (ORHVS) etc.

- No plant is to be returned to service without the cancellation of all permits on that plant in accordance with procedure.

NB: in the case of live work, a "live work declaration form" is to be completed by the authorised person who is the person responsible for the safe execution of work according to relevant standards and procedures.

Please ensure that these rules are understood and communicated with the urgency that they deserve. If any of these rules are unclear or the consequences not understood, please do not hesitate to discuss it with Eskom.

We would like to continue our current partnership and therefore urge your support in the implementation and upholding of these rules.

3.9 Working on the *Employer*'s property

This part of the Scope addresses constraints, facilities, services and rules applicable to the *Consultant* whilst he is doing work on the *Employer*'s property.

3.9.1 People restrictions, hours of work, conduct and records

It is very important that the *Consultant* keeps records of his people working on the *Employer*'s property, including those of his Subconsultants. The *Employer's Agent* shall have access to these records at any time. These records may be needed when assessing compensation events.

3.10 Things provided by the *Employer*

- Access to working areas
- All consumables in line with providing the services on site

4 List of drawings

4.1 Drawings issued by the *Employer*

This is the list of drawings issued by the *Employer* at or before the Contract Date and which apply to this contract.

Drawing number	Revision	Title
0.41/403	1	Arnot Power Station Ash Return Water Reservoir Overflow Chamber Details
0.41/24526	2	Arnot Power Station Ash Dam Ash Water Return Dam 6 G.A. of Temporary Penstock Platform & Hoist
0.41/24524	1	Arnot Power Station Ash Dam Ash Water Return Dam 5 G.A. of Temporary Penstock Platform & Hoist
0.41/18478	0	Ash Dam Seepage Recovery New Dam Layout and Details
0.41/18149	2	Layout and Details of New High Level Reservoir
26.41/38530	0	Dam Wall Typical Sections & Details
26.41/38529	0	Dam Detail Layout Plan
26.41/38072	0	Arnot Power Station Storm Water Runoff Dam and Pipeline Storm Water Dams Layout
0.41/18365	2	Layout & Details of New Stormwater Catch Dam
0.41/18443	1	Electrical Layout of Lower A.W.R Dam
0.41/1094	0	Arnot Power Station Raw Water Reservoir Piping Layout
0.41/838	2	Arnot Power Station 100 Million Gallon Raw Water Reservoir Layout and Details
26.41/38528	0	Pollution Control Dam At Station Drains General Layout Plan
0.41/18143	0	Layout and Details of Station Drain Trap Dams & S/W Catch Dam
0.41/20066	A	Arnot Power Station Wet Ash Dam Ringfeed System Preliminary Layout
0.41/657	10	Arnot Power Station Ash Handling Plant Dams & Piping Layout
0.41/18443	1	Electrical Layout of Lower A.W.R. Dam
0.41/402	1	Ash Water Return Reservoir Layout
26.41/	00	New 160ml Ash Water Return Dam Layout
26.41/	01	New 160ml Ash Water Return Dam Sections
26.41/		New 160ml Ash Water Return Dam Dam Outlet: Layout
26.41/	01	New 160ml Ash Water Return Dam Dam Outlet: Sections

26.41/	01	New 160ml Ash Water Return Dam Dam Outlet: Intake
26.41/		New 160ml Ash Water Return Dam Dam Outlet: Overflow Chamber
26.41/		New 160ml Ash Water Return Dam Dam Outlet: Overflow Chamber Sections
26.41/	01	New 160ml Ash Water Return Dam Herringborne Drainage System: Layout
26.41/	01	New 160ml Ash Water Return Dam Herringborne Drainage System: Sections
26.41/		New 160ml Ash Water Return Dam Herringborne Drainage System: Sections
26.41/		New 160ml Ash Water Return Dam Dam Inlet: Pipeline Layout
26.41/		New 160ml Ash Water Return Dam Dam Inlet: Pipework Detail of New Connection
26.41/		New 160ml Ash Water Return Dam Dam Inlet: Pipework Section and Detail of New Connection
26.41/		New 160ml Ash Water Return Dam Dam Inlet: Pipework Section and Detail Inlet Structure
26.41/		New 160ml Ash Water Return Dam Dam Inlet: Pipe Schedule