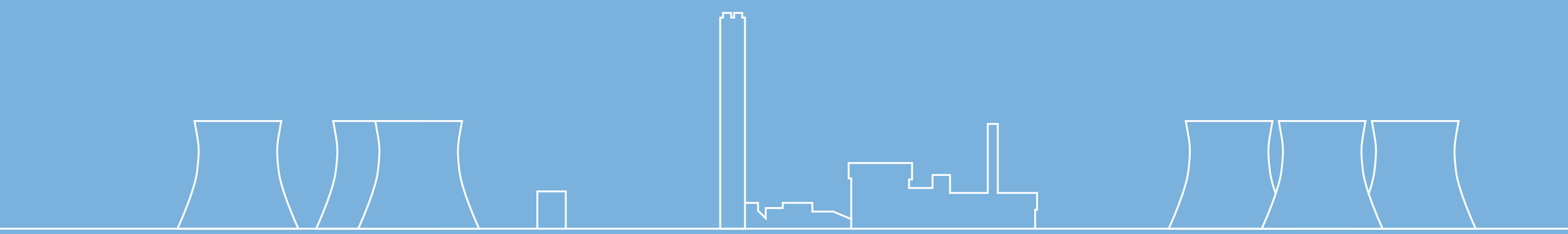


where clouds are made

edited by Barbaresi & Round

Introduction

Barbaresi & Round

In researching our project, “Where clouds are made” about the life of Didcot A power station, we have been presented with vastly more material than we could possibly process or do justice to. Not coming from engineering backgrounds, many aspects have surprized and subverted our expectations of how a power station might work in practice.

Many people have a relationship with Didcot A from a range of different perspectives. These include employees, retired employees, residents of Didcot or the numerous people who have taken in the enormity of the cooling towers as they pass on the train or the M40. This book aims to create a space for a few of these different viewpoints.

We would particularly like to thank Will Wiles, Martyn Bull, Paul Bodsworth and the DPS camera club for their contributions, as well as our workshop participants who gave their time to relate many vivid stories about Didcot A and it’s history.

You can see more of the material we gathered at
whereclouds aremade.blogspot.com

Where clouds are made

Will Wiles

Photograph © Paul Bodsworth, SLoD

A school excursion into the Oxfordshire countryside – I cannot remember exactly where or exactly when, but the purpose was to Look At Nature. Equipped with sketchbooks, we Oxford schoolchildren were released into a beauty spot to draw the flora and fauna we found. One of the teachers told me about last year's trip. She had a pupil, she said, who was always drawing machines: cars, helicopters, motorbikes, aeroplanes. It had been her great hope that this nature trip would expand his range of subject matter, and some rustic charm far from the main roads would perhaps soften his petrolhead tastes. Go off and find something beautiful, she said, something that inspires you, and draw that.

When she caught up with him a short time later, she found he had filled his sketchbook with drawings of Didcot Power Station, which was prominent on the horizon.

This story was told in a tone of baffled, faintly melancholy, amusement. The lad, I was expected to agree, was a hopeless case, incapable of appreciating the beauty around him, locked in a monomania. Who could possibly ignore the woods and the frolicking wildlife in favour of the rough beast slouching in the valley? The power station was not supposed to be looked at and admired – we were supposed to ignore it, to participate in the collective voluntary delusion that it was invisible. Never mind the heat and light it provided, the necessities, conveniences and luxuries it sustained: it did not exist.

But it did exist. There it was. And the teacher's story had the unintended effect of making me really look at Didcot for the first time. That boy last year had seen something beautiful and inspiring in it – what was it? It was an epiphany. I realised that there was more than one standard for beauty, that far from being a kind of club that included some things – trees, flowers – and excluded others, it was a universal quality that could be found anywhere, everywhere, depending more on who was doing the looking rather than what was being looked at.

Growing up in Oxford, Didcot was often there to be looked at. It is a well-travelled and many-faced beast, appearing in many unexpected places, and showing different forms that ranged from the colossal to the miniature – it could be anything from a prehistoric behemoth to a collection of porcelain thimbles.

There are two views of Didcot that I will always particularly treasure. One is up close, the other from a great distance. On the train, Didcot often appeared as a surprise – it's hard to imagine that anything so huge could sneak up on someone, but as the train slowed into Didcot Parkway I would look up and find myself at the base of the cooling towers, as if suddenly in the midst of a giant stone forest.

The other view is from the Stokenchurch gap on the M40. Coming through the gap, you are for a time enclosed by the chalk of the Chilterns. Then, quite suddenly, southern Oxfordshire opens out before you, a vista that includes a full quarter of the county. To the far left is Didcot, at the edge of this great expanse of green, shrunk almost to nothing, hard to locate in the haze and jumble of the horizon. But, in the right weather, it was easy to find by its plume: the atmospheric super-sculpture, miles long and weightless, sometimes a streak, sometimes a pillar, sometimes invisible, that was its life's work. This cloud pointed out the plant like a signpost.

Didcot is where clouds are made, the giant cooling towers slowly and silently blowing fresh cumulonimbuses into atmosphere. I was a child when I was told this, but old enough to see that it was one of those lies adults tell children to test their credulity. It might be a lie but it's the best kind of lie: an enchanting lie, a lie that is worth entertaining and enjoying, savouring in the imagination like an unfamiliar flavour on the tongue. It is also not wholly, not even, a lie. Didcot might not be responsible for filling the sky, but it does make its contribution. And unlike the natural specimens, Didcot's cloud was firmly tethered to the ground. Often one finds completely different weather on the other side of the gap, giving Oxfordshire a sense of being a world of its own. The power station might be tiny from the chalk canyon at Stokenchurch, but it completed the scene: it knit together the earth and the sky.

Both these views had the same meaning to me: I was almost home. Close by, on the train, the cooling towers were the concrete feet of a steam colossus, one that said welcome. On the M40 it was the twist of smoke from the chimney that showed the home fires were still burning. I have always been grateful that my eyes were opened to it.

Gibberd’s landscape analysis

Re-visited over 45 years on by Martyn Bull

Barbaresi & Round unearthed Gibberd’s viewpoints whilst rummaging around the archives at Didcot power station in the weeks before it was closed down on 22 March.

Gibberd’s viewpoints are 20 locations in the area at varying distances from the site of Didcot power station. The impact of the final power station design is sketched onto photographs of each location.

Landscape architect, and keen gardener, Frederick Gibberd took great care that the arrangement of the cooling towers, chimney stack and generator building was sympathetic to the landscape they would be built in. The design is unusual with the cooling towers divided into two groups of three. One is south of the generator building and the other lies to the north. There is a gap between the tower groups intended to soften the view when looking north from Gore Hill and the Berkshire downs towards the power station.

With access to the sketch map, notes and black and white photos from the Gibberd files, the opportunity to return to each of the viewpoints and recreate the photographs some 40 years on from when they were taken was too tempting to ignore.

Getting to each location by car is reasonably straightforward, but roads and field boundaries have changed, buildings have been built or knocked down. Finding the exact locations can take quite a bit of hunting around in the general area to find exactly where the photo was taken.

Searching for Gibberd’s viewpoints has turned into an ongoing project to document the beauty of Frederick Gibberd’s great industrial masterpiece in the Oxfordshire landscape. Sometime soon, the power station will be taken down. The views and memories will change but the land will always be the same.

Martyn Bull, April 2013

Principle viewpoints showing the relationship to the final design to the region.

Distant views
3. Gore Hill, 5 miles
6. Woodcote – Crowmarsh Road, 7.5 miles
7. Britwell Hill, 11 miles
8. Ewelme – Watlington Road, 8.5 miles

Valley views
2. Hagbourne Hill, 2.75 miles
4. Rowstock, 2.25 miles
9. Wittenham Clumps, 3 miles
16. Abingdon, 3.25 miles

Village views
10. Long Wittenham, 2.25 miles
13. Culham Bridge, 2 miles
17. Sutton Courtenay, 1.25 miles
19. Milton, 1.3 miles

Distant views

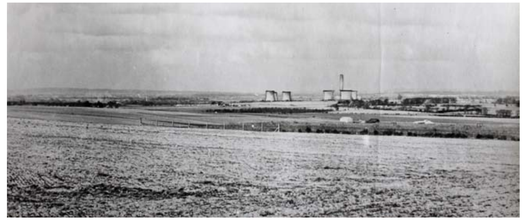
3. Gore Hill

Today I park at the Ridgeway car park on Bury Down and hike along the Ridgeway path to Gore Hill. Ground is solid underfoot. The sun is shining and the power station looks magnificent with a sunbeam highlighting the turbine hall.

A wind builds rapidly from the south and a weather front comes sweeping across the sky killing the light. I work fast to get the photos, trying a number of things to match the exact view in the photo. I spot a tree that has the exact same shape as one in the photo, and that gives me the line-up I need.

Valley views

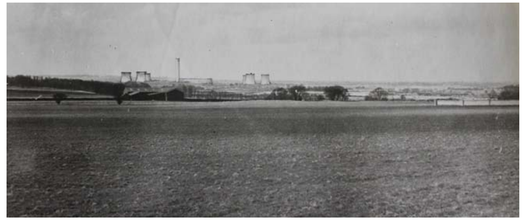
2. Hagbourne Hill



11 March 2013

Gibberd must have come to the location by car, so I turn into the road to Hagbourne Hill Farm and park. This is definitely the correct elevation and position. What I hadn't reckoned on was the 20mph wind head on to the hill, gusting so hard it nearly blows me over. Keeping the camera tripod steady proves tricky. Plus my fingers are nearly numb. Lining up the tall chimney with the edge of the cooling tower makes it straightforward to find the original photo point. I wonder if Gibberd himself took the photos? Did he come to this place and contemplate the landscape, or did he send an assistant to collect the photos for him to reflect upon? I like to think I'm walking in Gibberd's footsteps.

9. Wittenham Clumps



17 March 2013

Five days until the power station closes. It's been impossible to contemplate photography outdoors. Cold, heavy snow, ice. A sudden change in the weather today. I head out just before sunset starts throwing beautiful colours into the sky. The roads are awash with flood water from the rapidly thawing snow running off the fields. In the car park at the foot of the Clumps, I realise that this is where Gibberd's photo is taken from. All around the fields are covered in snow, but birds are singing in the trees. Apart from the occasional car passing, they are the only sound. Clouds of steam float away from the cooling towers. I reflect on the near silence here compared to the thundering roar of spinning turbines inside the power station.

16. Abingdon

3 May 2013

On the river bank of the Thames. I can line up the original photo with the location since there is exactly the same fence on the opposite bank, and white eaves of a small building on the west side of the river. It is striking how few trees are along the river bank in the old Gibberd photo. Now I have to move to a new position where the power station isn't obscured by trees. A rowing boat travels up and down the river in line with power station.

Village views

10. Long Wittenham

3 May 2013

Bright sunshine and a warm spring day. The location in Long Wittenham village is simple to find, but the view of the power station is obscured by a large tree that wasn't there in the late 1960s. I reflect on how quickly and slowly trees grow, and realise that 40 years is a long time. A shop in the old photo is now a cottage, but the school is still present. The smell of fresh cut wood mixes with Radio 1 as builders rennovate an old building.

Moving down the village to the village hall, there is a beautiful view of the top of the chimney stack peeking over the trees and thatched rooves of the village. Just as Gibberd sketched on his photo.

13. Culham Bridge

3 May 2013

Driving back to Didcot via Culham bridge, old single track bridges that cross the River Thames. The power station shouldn't be visible from the dip of the road down to the river, so I've not really planned to take a photo at this location. Sitting in the traffic queue, I can't see the power station, but I realise I must be about 10 metres back from the Gibberd photo position. I grab my camera and take the photos through the windscreen, just as the traffic lights change to cross the bridge. They weren't there in 1970. I wonder how cars meeting on the bridges used to decide what to do to pass each other?

19. Milton

3 May 2013

I take a wrong turning in Sutton Courtenay village and drive down an unfamiliar road to Milton village. As I turn a corner, Gibberd's photo fills the windscreen. Exactly the same tree, and a long terrace of brick cottages. The sketch has the turbine hall oriented differently to how it was finally built. I realise that the photographer would have had to read a bearing off a compass in order to point the camera at a empty space where the power station would be.

Construction of the main chimney

Barbaresi & Round in conversation with retired employees of Didcot A

Brian: That chimney was slip-formed. You know what slip-formed means? You see that circle, the scaffolding? The concrete is pumped up from the inside and it's poured constantly into that form and that's moving all the time, that construction, that scaffolding it's being pushed up constantly, very slowly, very very slowly. All around here, (points to newspaper cutting) there would be all around this rim, little jacks pushing it up all the time hydraulically. Constantly moving.

Sandy: So what you see there that's the top of the tower being pushed up.

Brian: Yes, in here called the surround it is being constantly poured in there, there are men working here all around the top, building forms all around and this operation is continuous, it is just growing. It was built very, very quickly within about three or four weeks. It never stopped moving. That's what is called slip forming. Most concrete chimneys are built in that way.

Rachel: Was there some kind of mould around the scaffolding?

Jim: You got rows of wooden moulding that you pour the concrete into.

Brian: It's pushing against the concrete that you have already been in there. Ordinary concrete takes about 28 days to reach its full strength. I would suggest that was not ordinary concrete. That it was…what do they call it? There is a French name for it, but it would have sufficient strength in it after a day or two to take the weight of these rams that are pushing this thing up, and it was going so slowly.

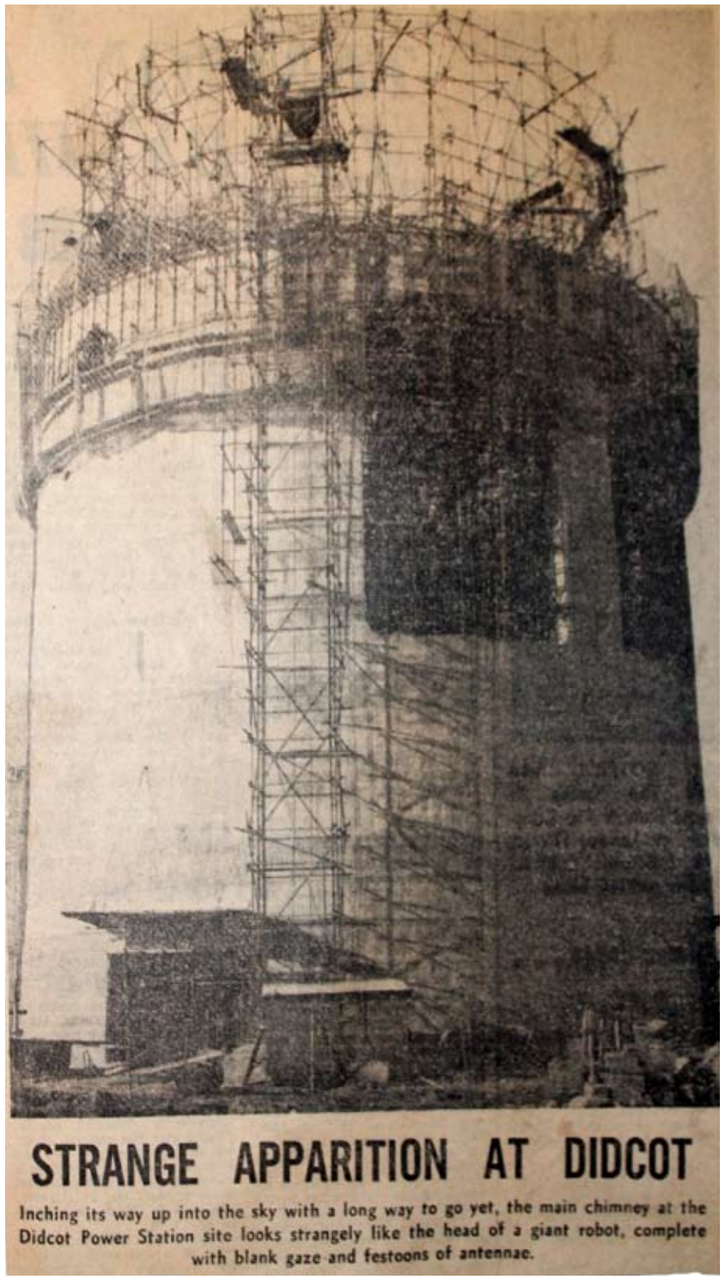
Rachel: It was pushing from the dried concrete as it pushed up. Are there steel bars in it?

Brian: Oh there's steel in it. You can see the people. They would be putting the steel up. Within the concrete wall there is reinforcing.

The giant 'toddler'

Although the chimney at the Didcot power station site is only a "toddler" in terms of its growth pattern—it has 500 feet to add to its present 150 feet—it is already a very impressive sight. The smoke flues can be seen getting a head start on the concrete "skin" which will eventually hide them from view.

"Oxford Mail" – 30/2/67



STRANGE APPARITION AT DIDCOT

Inching its way up into the sky with a long way to go yet, the main chimney at the Didcot Power Station site looks strangely like the head of a giant robot, complete with blank gaze and festoons of antennae.

Revisions and re-engineering

Barbaresi & Round in conversation with retired employees of Didcot A

Brian: It was anticipated that having the station in this area (Didcot) would reduce the capacitance down on the south coast. Bring down the voltages.

Of course all this was at the same time as the super grid was being built. Which, instead of being 132,000 volts went up to 400,000 volts. All this impacted on what was built here and in fact there were two machines here that had special rotas. They were designed to absorb mega bars, which was what produced this capacitance but in the long run they didn't work. So that never went into production.

Rachel: I suppose because it was all very revolutionary there must have been a lot of things which were tried here, and either didn't work or go into production. There must have been a lot of experimentation.

Brian: We were working on the edge of technology. Even with regard to the pipe work and the connections between the boilers and the turbines. The pipe work was stainless steel. I don't know the dimensions, but the thickness of the walls of the pipe was something like four inches. So you got a pipe that sort of size it was dealing with pressures with something like 2000 pounds per square inch and a temperature of something like 1050˚F which would melt ordinary steel.

Susanna: So was it a question of engineers getting their heads together and thinking how do we solve this new problem that has come up?

Brian: Yes indeed. So there was a technical development section. There was a man, who must have been a very good engineer; his department was responsible for re-engineering a lot of the plant particularly the LP heaters. Well there were problems with everything… but eventually everybody got to grips with it.

Rachel: So how long do you think it took between the station being built and resolving a lot of these problems so it was running efficiently.

Brian: Oh it took, well between about 12—14 years.

Jim: We were committed in 1970—74. There were all sorts of problems with the plant in the early days and the coal plant was pretty well redesigned from the one that was actually built. It was probably the 1980's before we had it.

Year delay for Didcot switch-on

ELECTRICITY PROUCTION at the £90m. Didcot Power stations is expected to begin next June—a year later than originally planned.

Repairs to four boilers, found during the summer to have hairline cracks, have caused a six-mouth delay. And labour disputes, bad weather and other factors have put back the starting date by a further six months.

Mr. Denis Longman, site manager, said two of the three boilers—each costing £6½m. — already at Didcot had been repaired and work would now start on the third. The fourth is being repaired by the suppliers, Babcock and Wilcox, in Scotland.

He said the cost of repairing the boilers — the cracks are 1,000th of an inch wide—would run into six figures.

New detection

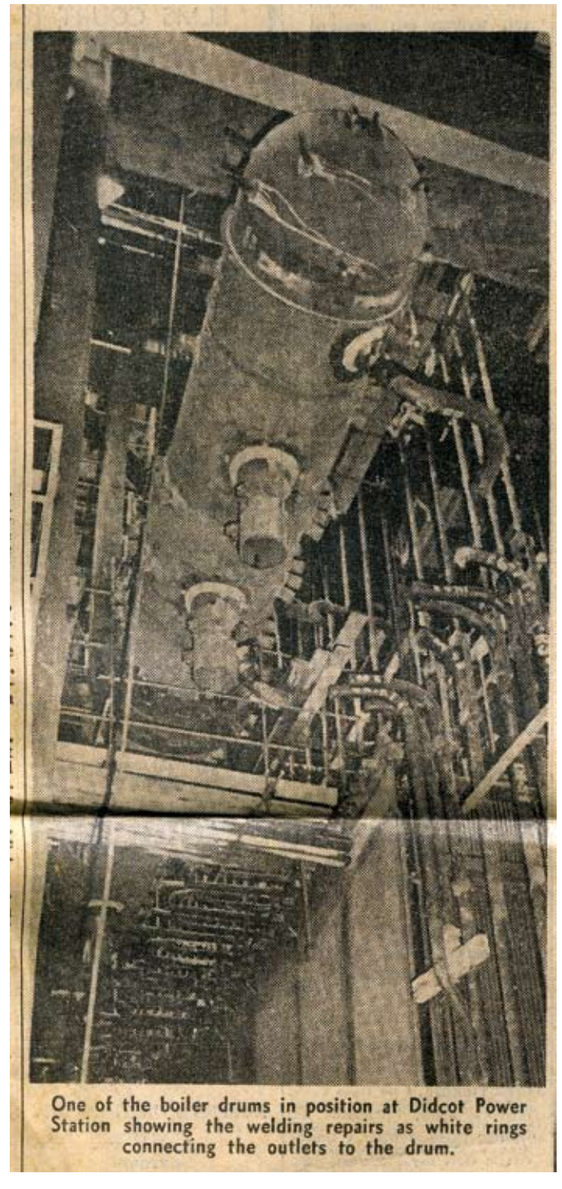
A spokesman for Babcock and Wilcox said the cracks seemed to have been caused by fluctuations in temperature.

They had occurred where 18 pipes were welded into the boiler drum and would not have been found but for new ultrasonic methods of detection.

If the cracks were allowed to widen, the drums could burst and throw out thousands of gallons of water and steam.

The cracks were first found last year in boilers at the Cockenzie Power Station, Scotland. The Central Electricity Generating Board inspected 20 similar boilers at other stations and 14 were faulty.

A C.E.G.B. spokesman would not say who would pay for repairing the boilers. "It is a matter of negotiation between us and the makers," he said.



One of the boiler drums in position at Didcot Power Station showing the welding repairs as white rings connecting the outlets to the drum.

Mega watt mews

Barbaresi & Round in conversation with retired employees of Didcot A

Jim: I left school and didn't really know what I wanted to do. I went down to what was then the local youth employment service. They sent me down to the local power station. This was Stockport. I was interviewed for a job as a junior clerk and got it. That was 54 years ago. So I did a year or so in the office at Stockport. Then I moved on into headquarters at Stockport, then I moved to Oldbury-on-Severn, which was a nuclear power station on the river Severn, then I moved to our headquarters at Bristol.

Then in 1970 I came to Didcot, and I'm still here. I come to Didcot to run the personal and salaries.

Rachel: So were you transferred from the CEGB (Central Electricity Generating Board)?

Jim: Oh yes. It was a whole national organization. All jobs were advertised at every location, if you fancied something you could apply for it.

As far as the operators were concerned, the only place you could get a skilled operator or a skilled engineer from was another power station. So in the early days lots of the people who came to Didcot were already within the company CEGB working somewhere else.

Lots of people had to relocate. Talk about housing as well, we had an arrangement with what was then Abingdon rural district council. They built 30 houses in Abingdon for what we would term key workers. The road was known as mega-watt mews! We had a similar arrangement with Didcot in later years.

Rachel: I guess proximity was quite important. It would be really important for people to be nearby.

Brian: and with shift work finishing at 10.00 at night.

Jim: Of course the thing was as operators was if your relief did not come in you could not go home.

Brian: You led a delegation to Scotland didn't you?

Jim: We used to do some recruitment in different parts of the country. We would advertise in say the Glasgow evening paper or the Newcastle evening paper, and would actually go up there to do some initial interviews, hire a room in the job centre there. And Liverpool, we had quite a few scousers here. Then the people we liked we then invited them to Didcot, We would do a proper interview. And I or some other people would show them around Didcot. Of course the problem with Didcot is that it is a really expensive area in terms of housing prices in comparison to Newcastle or Glasgow. Unless we could provide them with a house people couldn't come.

Susanna: So did you often do that?

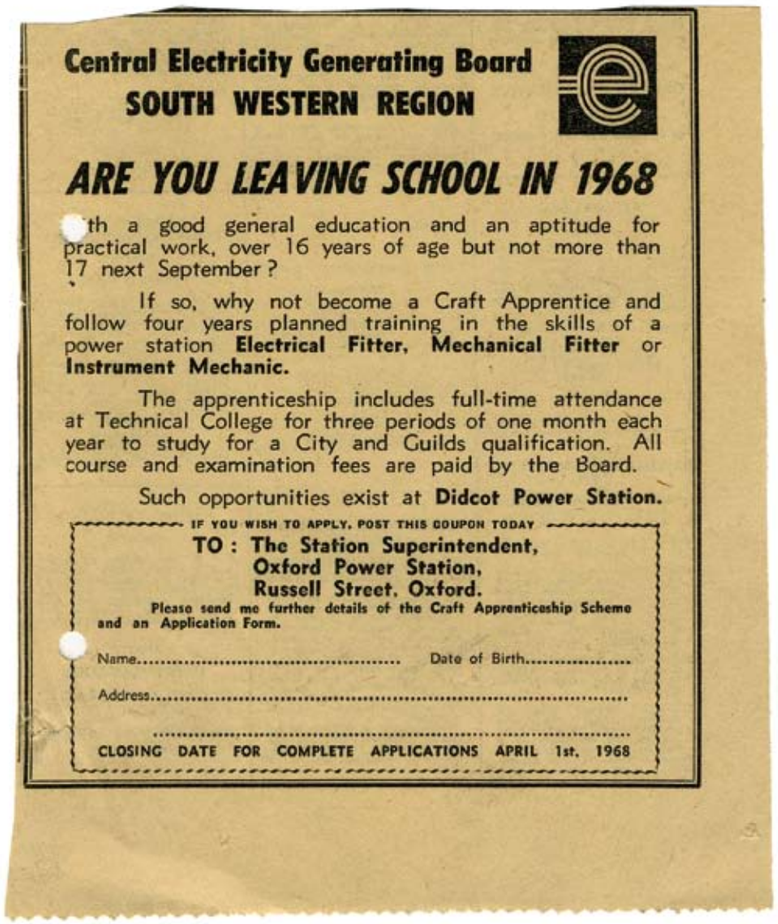
Jim: Yes. We had this arrangement with the local council to provide houses for key workers.

Susanna: How was it? I'm imagining all these people from quite different parts of the countries with very different backgrounds together. Did people get on?

Brian: Oh yes. Very cosmopolitan

Rachel: So it has shaped the local community.

Jim: Oh yes.



Central Electricity Generating Board
SOUTH WESTERN REGION

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Address.....

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CLOSING DATE FOR COMPLETE APPLICATIONS APRIL 1st, 1968

The Social Landscape of Didcot

Photographer, Paul Bodsworth, looks at the view of Didcot A from the outside

On 31st March 2012, Paul Bodsworth, having recently been made redundant, decided to start a photographic project in Didcot. He set up a facebook page “The Social Landscape of Didcot” (SLoD), and started taking pictures.

He quickly gained a huge following and more than 1000 people have ‘liked’ his page. We met with Paul and a few of his followers at Cornerstone Art Gallery on 4th March to see a selection of his images, and to chat about Didcot and the power station.

We’re sharing a few here, but there are many more at
www.facebook.com/SocialLandscapeDidcot

This page, “Great Western Park” (New Estate)
Next page “Didcot A, December”

“Didcot A, Ladygrove mound at night”

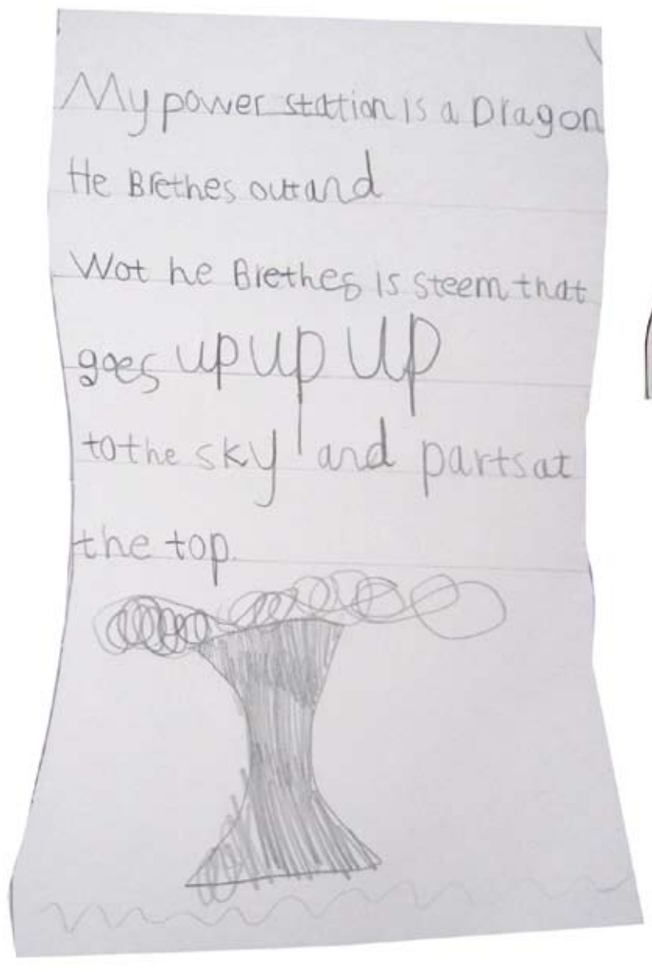
“Sun set from Collett”

“This is Didcot Parkway”

My power station

From the imagination of a six year old growing up in Didcot

Alexandra (6) has for several years been looking forward to being eight so that she could have a tour round the towers. Now that she's realised that's not going to be possible, she keeps planning the best locations to view the towers. Here are some of her ideas about them.

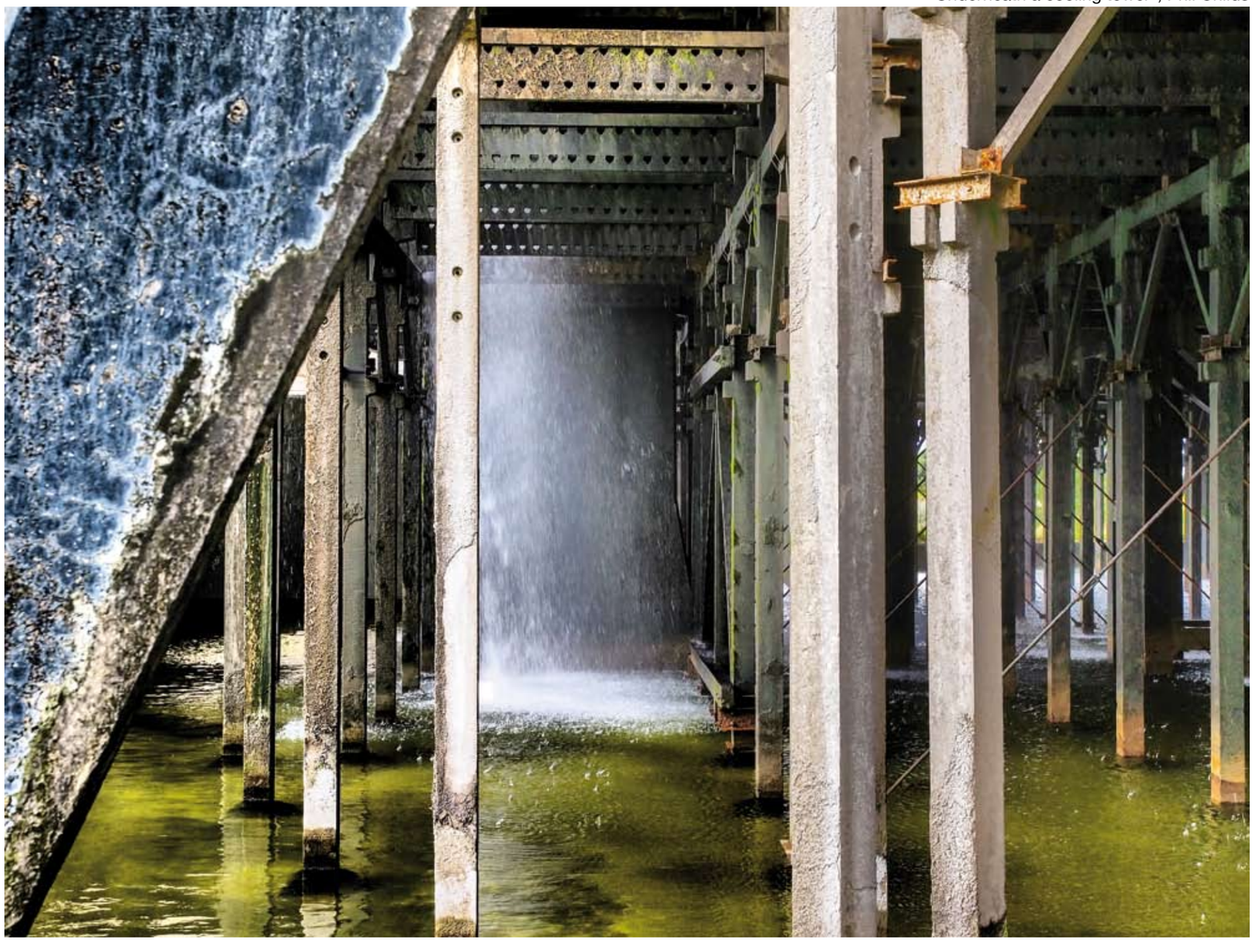


Inside the labyrinthe

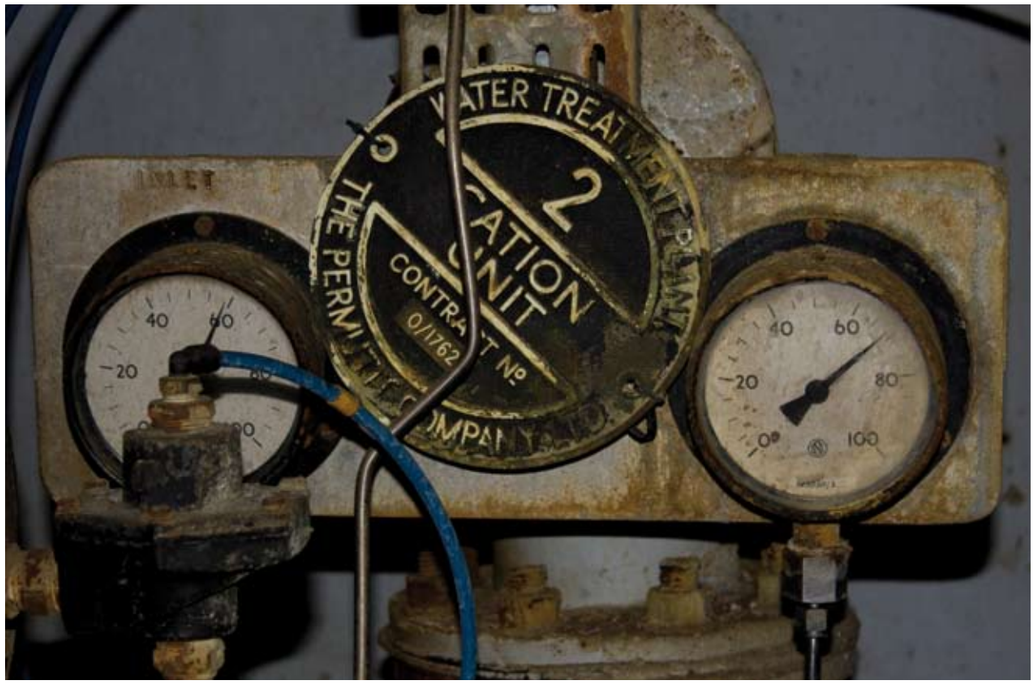
dps camera club get up close to towers, turbines, boilers and pulverisers at Didcot A

The Photographic Section was part of Didcot A's Sports and Social Club. They had a fully equipped dark room in the Sports and Social Club and at its peak, in the 1980's, there were over 100 members. With the approaching closure of Didcot A, members of DPS gained permission to document aspects of the power station from an insiders perspective.

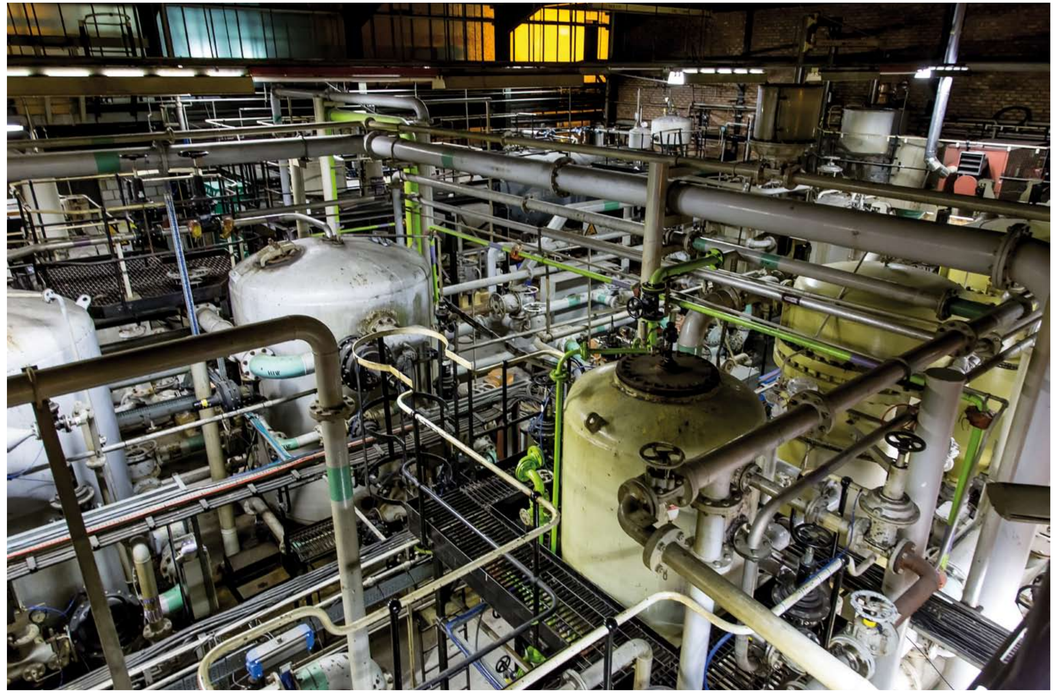
"Underneath a cooling tower", Phil Childs



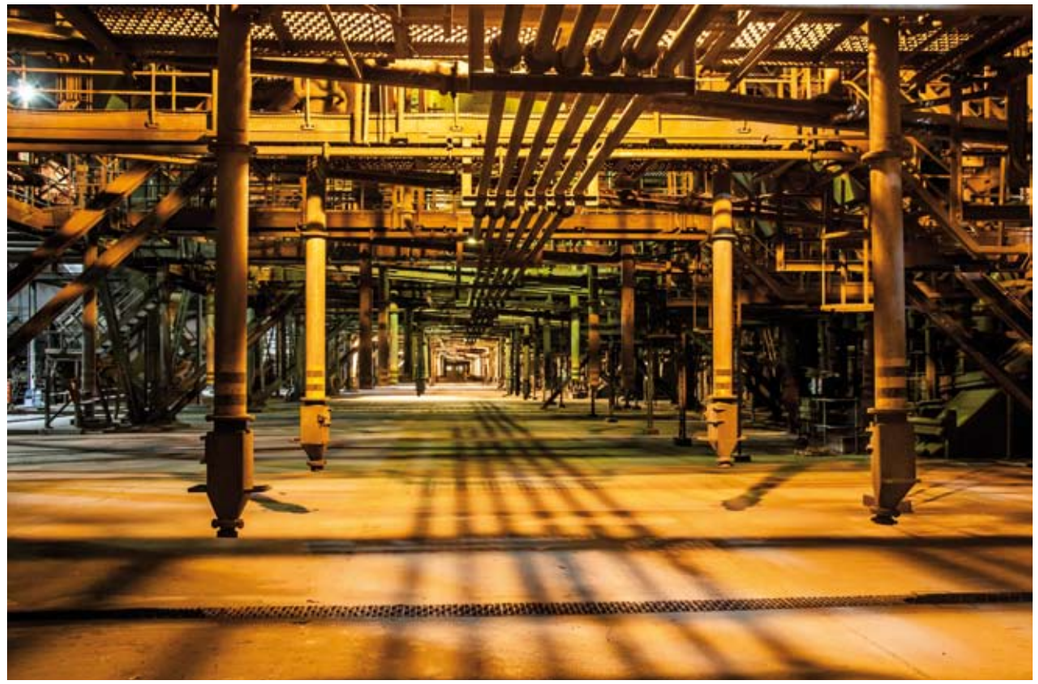
Clockwise from above:
“Inside a cooling tower” and “Pillars at the base of a cooling tower”, Mick Furby,
“Pipes going into a cooling tower”, Bob Brown



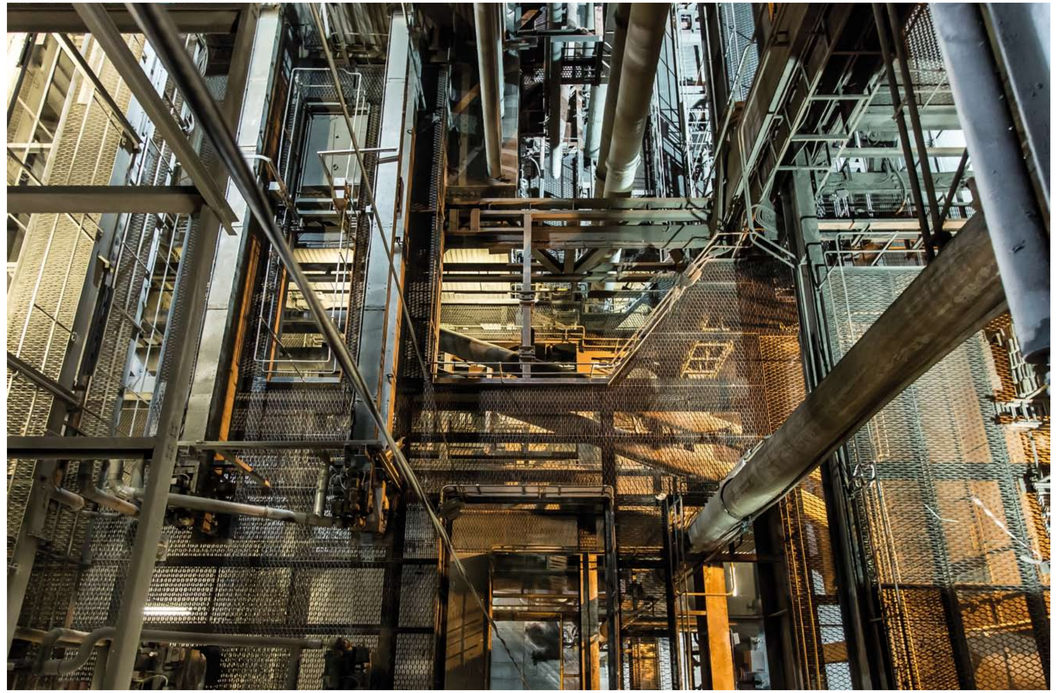
Clockwise from left:
“Towns water break pump”, Bob Brown,
“Pressure gauges No2 cation unit water treatment plant 1”, Mick Furby



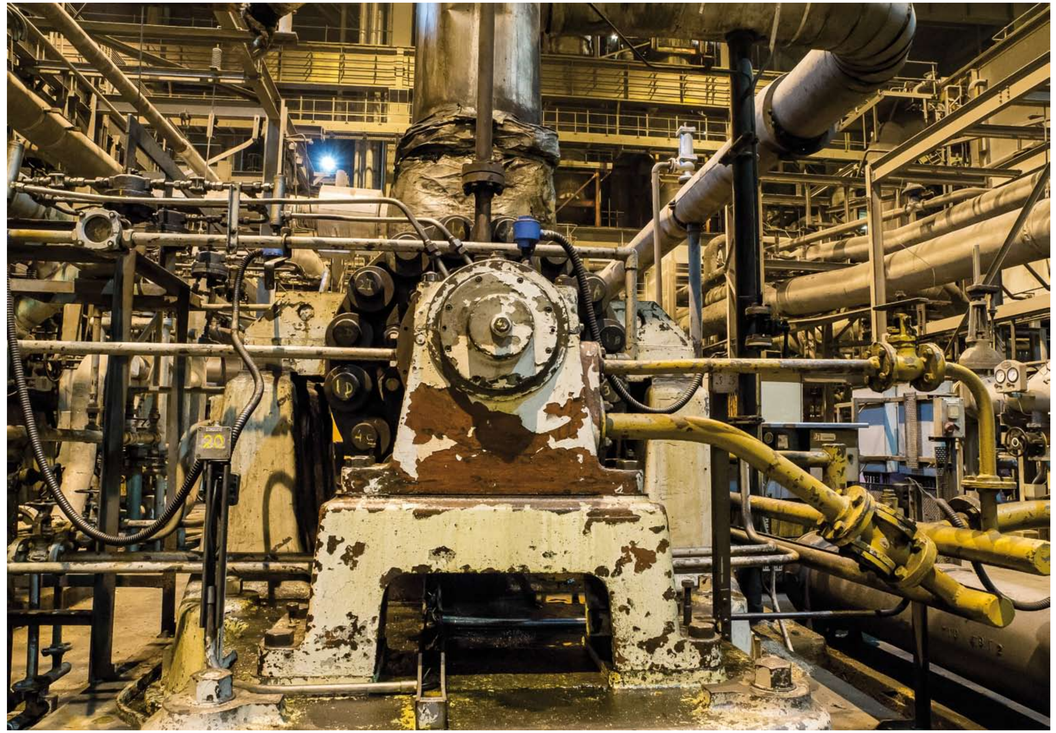
Clockwise from top left:
“View of water treatment plant 1”, David Belcher,
“Water treatment plant 1 pipework”, Mike Foster



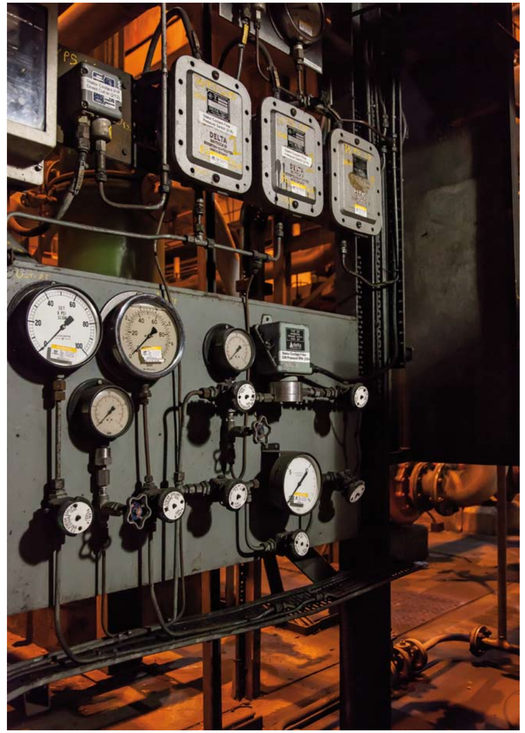
Clockwise from left:
“Ash plant pumphouse”, Sue Brown
“Precip Hoppers area”, Bob Brown



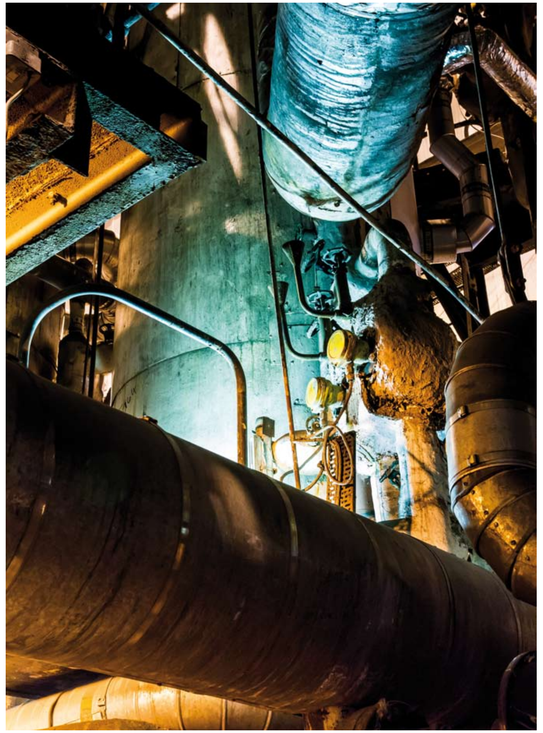
Clockwise from top left:
“View from 165ft level boiler house”, David Belcher,
“Precip Hoppers”, David Belcher



Clockwise from top left:
“Start & Standby Feedpump HP end”, Phil Childs,
“Start & Standby Feedpump”, Bob Brown
“Turbine fire protection system”, Gary Bennett



Clockwise from left:
“Stator coolant instrumentation”, David Belcher
“Turbine main oil coolers”, Nigel Brady
“HP heater pipework”, Mike Foster



Clockwise from top left:
“People at work at Didcot A”, Bob Brown

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