

Ancient Road Conservation Volunteers

Issue 2 April 2000



POCKSTONES MOOR PROJECT 2000



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DALETRAX LIMITED
01423-322011

Editorial Foreword

It is usual for the reader of any report to skip the opening titles and get straight into the "nitty gritty". Please take time to read these opening pages as it may give you a better insight to the reason for the project.

Water! Water! Everywhere but not a drop to Drink! as the Poet once wrote, and that about sums it up! We are made up of 90% of it and the other 10% can not survive without it. Half the Worlds population spend their lives trying to avoid it in one way or another such as floods or storms, while the other half are dying because of the lack of it. Water is Life's Blood! It is also the Major cause of the erosion of our Ancient Roads and Footpaths.

During the last half century, I have spent 30 years in the Leisure Industry, living at the side of a Major Yorkshire River, namely the URE, it's power and it's driving engine, Water, was never under-estimated.

In my early years, I was privileged in being introduced to the Yorkshire Dales and North Yorkshire Moors through Scouting, Youth Associations and the Duke of Edinburgh's Award Scheme and in those times I walked many of the Roads and Footpaths. In my working years, the normal pressures of Commerce reduced my ability to take time out in these areas.

Leisure Time is important, and not all people have the advantage of time to take in this beautiful area while walking, in fact, our Disabled Community is unable to do so. We are in the New Millennium, but, even during the last, time was of the essence, that is why such things as the Concorde were developed, to reduce travelling time to the USA from 8 hours to less than 3 hours. Rightly or wrongly, this is evolution, and hence visitors to the Countryside with the capability, wish to traverse the Ancient Routes in or on motorised transport.

When these Ancient Roads were first developed, they were travelled over by pedestrians, ox carts, horse and cart, Roman Chariots, Large Armies of foot soldiers and their supply wagons. As time progressed, the Stage and Mail Coaches evolved. These Ancient Routes were the BT and Internet Highways of their day, the means of National and Rural Communication. Land Owners ensured that these routes were well maintained and had the Agricultural Staff to do this. You only have to look at the thousands of miles of Dry-Stone Walls to see that labour was in cheap supply.

All through this era, Roads were maintained for such traffic to keep the lines of Communication open. Since the invention of the telephone and other such equipment and the introduction of the Tarmacadam Road, although still well used, they became of less importance.

The World Wars changed the labour market for ever, with the sad loss of much of the working population and this, combined with the returning troops who, possibly for the first time had experienced travel and looked at other ways of life, resulting in a labour force that became too expensive for non-essential road maintenance.

In the 50's and 60's, the Government paid the Land Owners to "Grip" and Drain their Land and so essential work was carried out until this scheme was stopped. Land Owner Drainage has only continued where Commercialism would be affected otherwise ie. Shooting Lets. On these areas of Moorland, the Roads have been maintained in very good condition, Grewelthorpe Moor being just one example.

On the Roads and Footpaths that have not been maintained, Water Corruption has resulted in the Ground becoming unstable, undermining the original stone culverts to the point of washout or total collapse and this has resulted in any traffic, pedestrian or vehicular contributing to further erosion.

If, as they are lobbying for, the under-funded National Park is allowed to take over the Management of the Ancient Roads and Footpaths, there is a distinct likelihood that their policies may result in vehicular traffic being banned from such routes.

When the Railways took over the Canals, the Waterways fell into disrepair through lack of use, in their turn, when some of the Railway Tracks were axed, they too fell in to disrepair. So too will these Ancient Roadways.

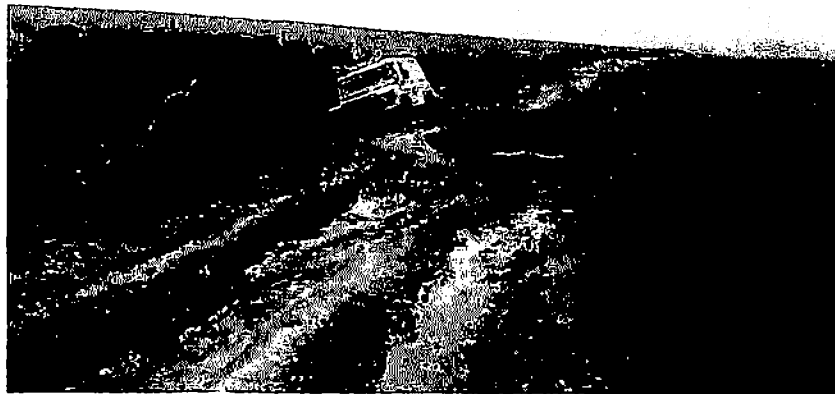
With everyone now crying out for an Integrated Transport System and also Restoration of our National Heritage many of these derelict communication lines are costing millions of pounds to restore. The Ancient Roads and Footpaths can and should, be restored at the earliest possible time to ensure their future. After all, what is the point of having our Areas of Outstanding Natural Beauty if they become in-accessible to All.

This is the reason why the ARCV is in existence, to assist Land Owners and Local Authorities through Voluntary Labour, Survey and Inspection, to fulfil their obligations in the most cost and time effective way to repair and maintain these roads.

The way forward is a "Joint Managed Solution"



THIS YORKSHIRE DALES NATIONAL PARK LANDROVER BECAME BOGGED DOWN AVOIDING THE ERODED SECTION

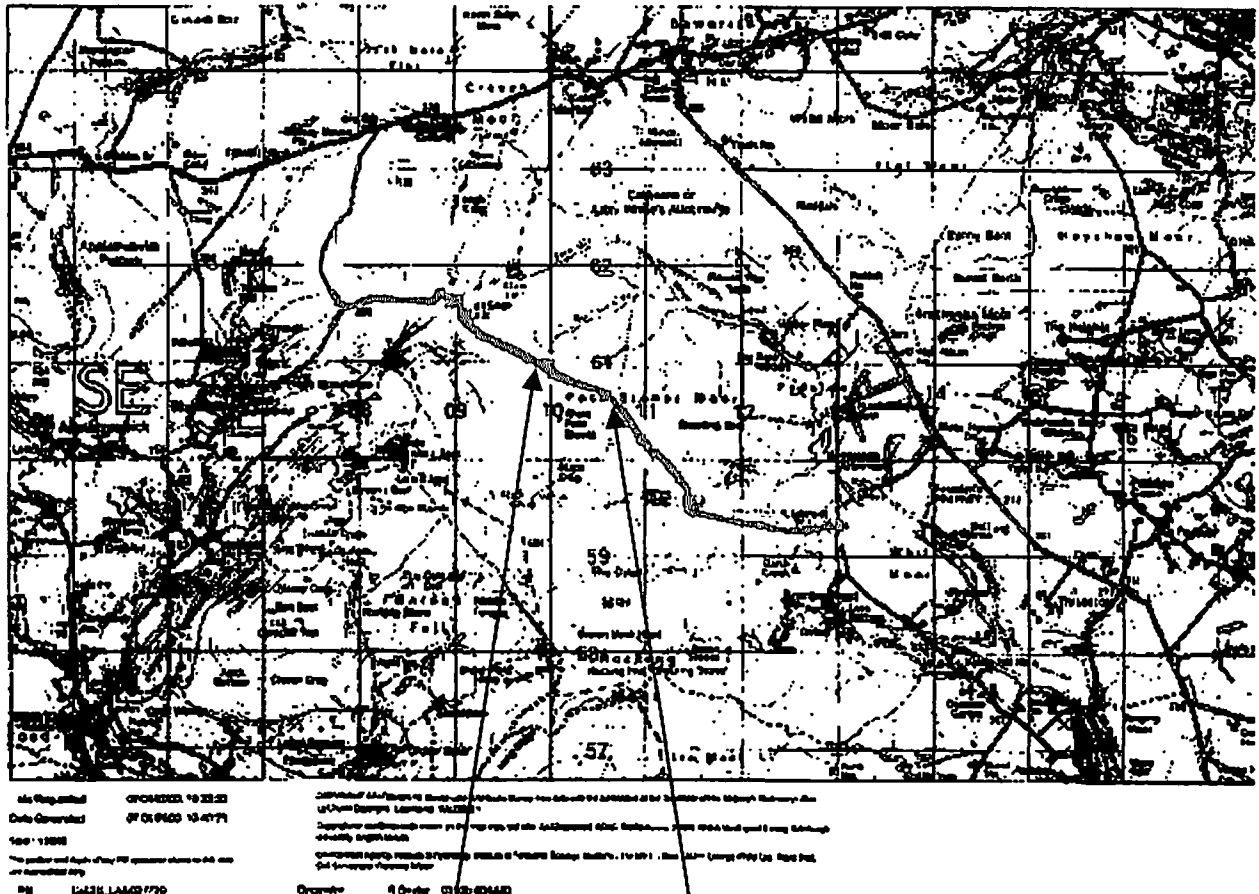


THE DRIVER SEEKS ASSISTANCE



LOCAL TRAIL RIDERS FELLOWSHIP MEMBERS CONTACT A LOCAL 4 X 4 CLUB MEMBER WHO PULLS THE VEHICLE CLEAR OF THE ERODED SECTION - THIS WAS A "JOINT MANAGED SOLUTION"

POCKSTONES MOOR PROJECT 2000 ROAD ROUTE MAP



The eroded section of road stretches between grid references
SE097610 & SE105607.

It can be seen from this illustration just how small this section is in
relation to the whole route.

POCKSTONES MOOR PROJECT 2000

ROUTE INSPECTION 11/12.04.00

Following a suggestion from Mr. Alan Burns, Maintenance Manager, Environmental Services, North Yorkshire County Council together with assistance from Mr. Bob Baxter, Recreation Manager, for Yorkshire Water, the route was inspected by the ARCV Management Members, Brian Lewis of the All Wheel Drive Club and Paul Sinkinson of Daletrax Limited.

The inspection started at the Main Gate Grid Ref. SE128593 in a Westerly direction along the Moor Road. With the odd pothole here and there, this road is in the main, in very good condition all the way through to SE105607. These potholes will require some small amount of road stone and "grips" cutting to ensure the holes drain well. One larger pothole was noted at 122593 and some car parts were found dumped in the beck at 113595.

The main eroded area starts at the wall join at 105607 where there is a 3ft approx. narrow gate to the South. There is evidence of early erosion at 104607 that will require draining and stoning as this is starting to deteriorate.

All the way down the hill route to 101608, water is running on the road and the side ditches need clearing to dry this out. There are one or two cross drains evident that require clearing and the road would benefit from side "grips".

At 100609 there is a lot of water evident and a large hole at 099609. The road in between needs filling and dressing over.

The Major Erosions run along this part of the route to 099610 with some minor ruts on as far as 097610. Total distance is around 800 Mtrs. Approximately ½ mile, with perhaps 50% of this severe.

The weather conditions encountered during the inspection, coupled with the recent spell of snow, highlighted the whole problem perfectly. Basically, due to reasons unknown to the writer, this area of the Moor has obviously not benefited from maintenance for some considerable time. If it had, then I am sure that the problem would not have arisen.

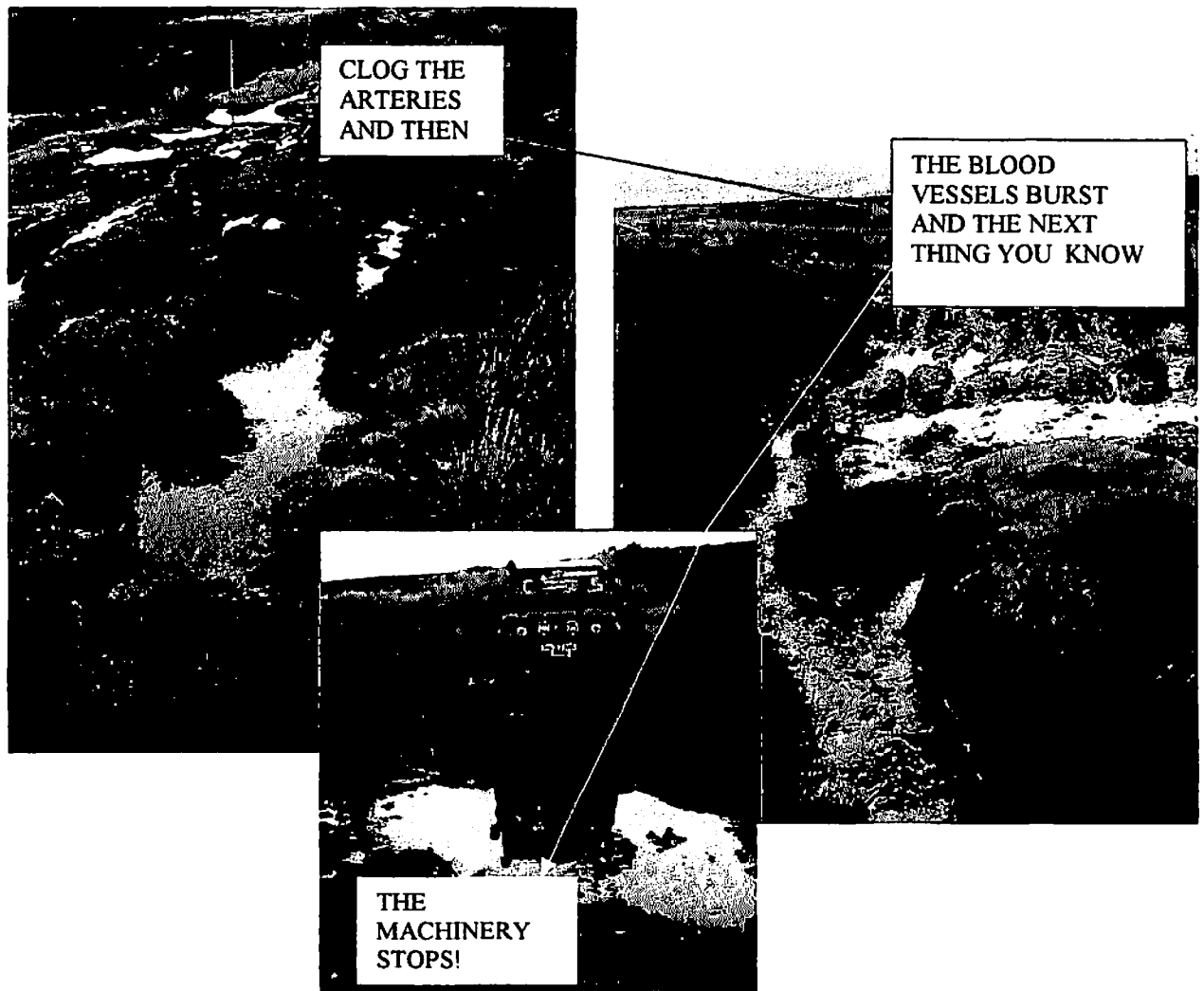
In the 50's and 60's, I understand that the Government offered financial assistance to Land Owners for the "gripping" and draining of Moorland and when that was abolished, the drainage maintenance came to a halt.

The majority of side ditches have become overgrown and blocked to the extent that water has run onto the road surface. In some places the original stone cross drains have eroded and collapsed and all this, coupled together over the years, has resulted in the whole area becoming totally de-stabilised through water corruption. This undermining of the road surface and water-logging of the sub-soil and peat has created the washouts seen today.

While there has obviously been vehicular activity on this route, by the Farming Community, Shooting Tenants, Contractors and Leisure Users, the numbers have been minimal and, although they may have contributed, they have NOT, been the Main Cause of the problem.

The Main Underlying Cause has been solely the Water Corruption resulting in de-stabilisation, as a result of Lack of Maintenance.

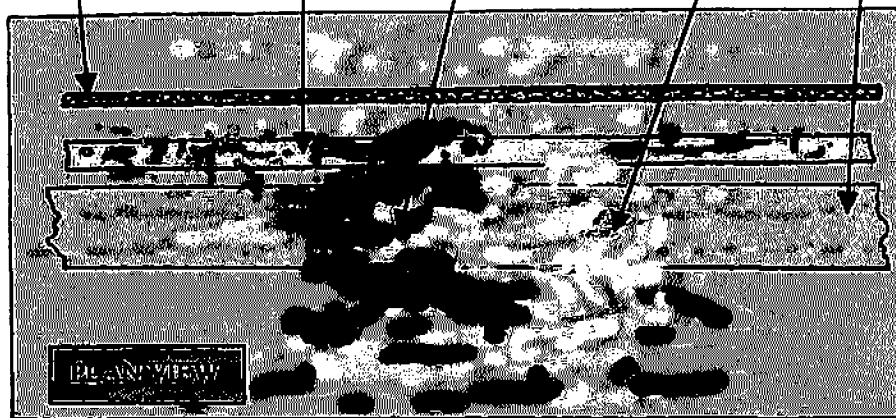
I have included several photographs of the eroded section for reference, along with diagrams highlighting the problems and, suggesting one cost effective method of re-instatement. This work could and, should be carried out quickly and economically and would provide a sound route capable of being easily maintained in the future, benefitting this local Area of Outstanding Natural Beauty.

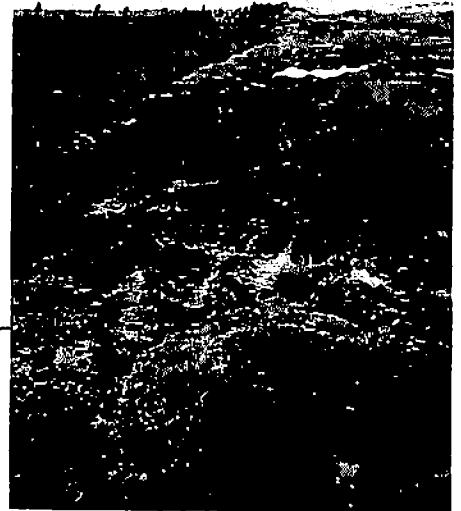
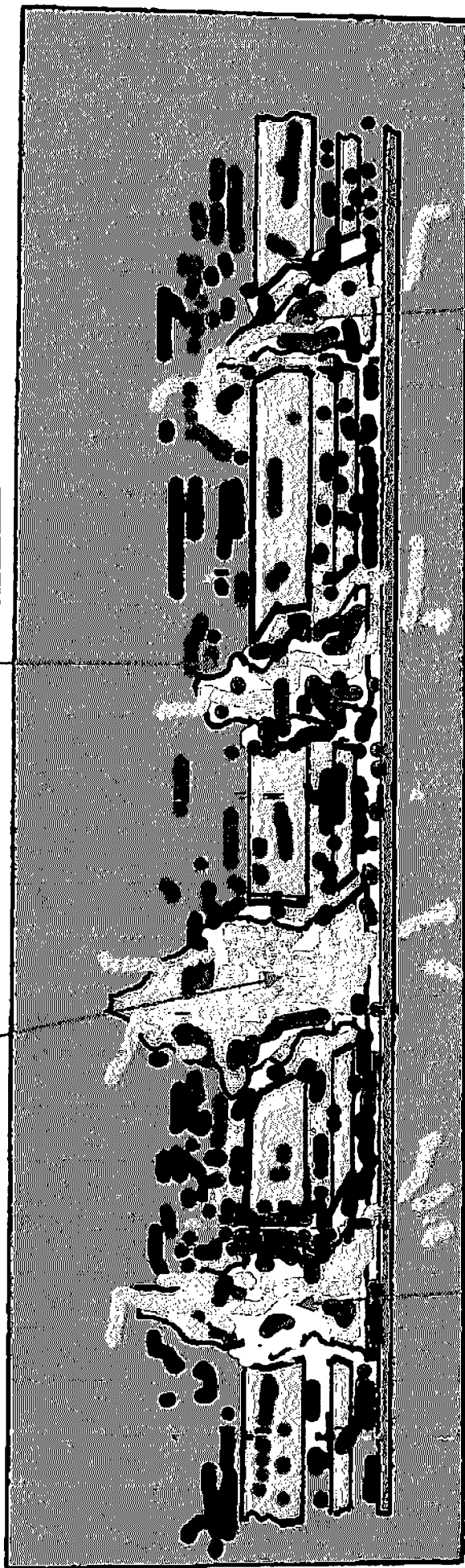
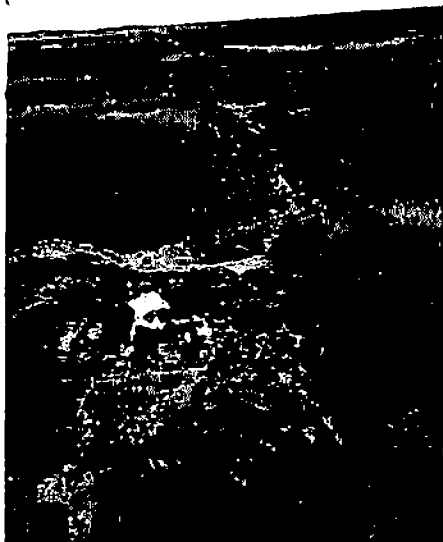


ONE OF THE MAIN AREAS OF EROSION



Dry-stone Wall Collapsed Ditch Wet Peat Wet Clay Road





THESE PHOTOGRAPHS AND
THE DIAGRAM INDICATE THE
MAIN AREAS OF EROSION



DAY TWO

On the following day, we inspected the other two access routes to the eroded area. The first was driven from the main road at 083634 Pateley Bridge to Grassington Road B6265 just West of Stump Cross Caverns.

This road is in good condition throughout and although there are one or two potholes that require "gripping" at 079628 and 077623 and evidence of some water running down the track which could be prevented by some side ditching work the road should not deteriorate. The road runs to the "T" Junction at 078615.

Here we turned East towards Pockstones Moor and the eroded area. The first section of this road runs up hill with a good side drain all the way up which is working efficiently, as is the cross drain at 079615. This example shows just what efficient maintenance can do and provides a good road surface.

Further on, there is some evidence of previous route damage 086616 which has obviously been machine repaired by either a Drott Tracked Vehicle or JCB with 4 in 1 bucket attachment, and re-surfaced with shale quarry waste of 1 inch to dust or similar. This may have been better, if the stone size had been slightly larger and with a bit less dust to bind it, as the fineness of the material has resulted in minor wheel ruts which although easily passable, are now standing in water. This repair runs up and beyond 087616 where it appears a little softer.

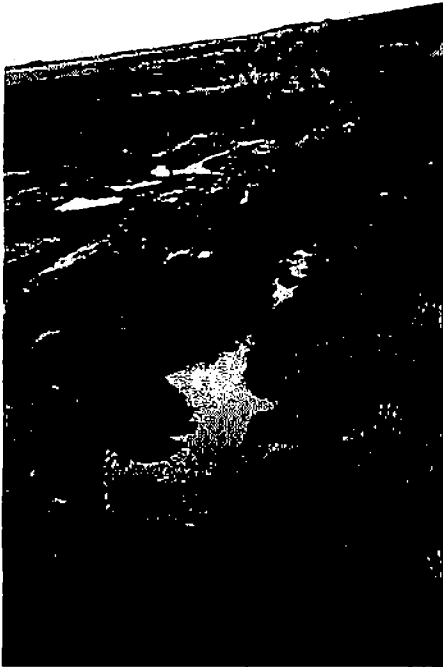
At the tight left hand bend 087616 there is evidence that motorcycles and possibly a light four-wheel vehicle has cut the corner and taken a route over the grass verge. A short fence up to the apex of the bend would prevent this. The cross drain at this point is working well but road drainage could be improved by "grips".

Further up the hill would benefit from side ditch clearance to get water off the road which shows signs of ruts and softness. Beyond the next gate, 090616 requires the potholes filling and side "grips" digging for about 40 yards.

The next main cross drain at 090615 is very good and beyond is well ditched, although the road requires stone in places. At 092613 the road would benefit from a new cross drain and the side ditches re-forming to take water off the road.

Although the next section roadway is solid it has water running along it all the length due to poor or blocked side ditches. At the end where it meets the Main Pockstones Eroded Area, there are a few ruts that require attention up to 097610. It is noted that Vodafone Mobiles work at this point. Total Road length from B6265 at 083634 to 097610 is 2.6 Miles.

THE LEFT HAND PICTURE SHOWS THE BLOCKED AND WATER-LOGGED DITCH WHICH HAS ALLOWED WATER ONTO THE ROAD SURFACE.



THE PICTURE BELOW RIGHT, SHOWS A STONE CULVERT WHICH IS COLLAPSING ON A SOLID STRETCH OF ROAD DUE TO THE UNDERLYING PEAT BEING SATURATED THROUGH BLOCKED DITCHES.



THIS PHOTOGRAPH SHOWS HOW POOR MAINTENANCE ON THE DRAINAGE DITCHES CAUSES THE PEAT TO BECOME SATURATED TO THE POINT OF BECOMING UNABLE TO SUPPORT VEHICLE GROUND STRESS ON THE STONE ROAD SURFACE. THE PEAT SINKS TAKING THE SURFACE WITH IT. THE ORIGINAL ROAD CONSTRUCTION CAN CLEARLY BE SEEN AS A LAYER SANDWICHED BETWEEN THE SATURATED AND THE DRY PEAT



THE GOOD

The left hand picture shows a good working culvert on a well drained section between the "T" Junction and the eroded section. The ditches and culvert are both in good condition, providing a good dry road.

The picture below shows a side ditch working well on the road immediately to the East of the "T" Junction again providing a dry road surface.



THE BAD

Blocked side ditches have resulted in all the water running onto and down this road surface from, the top to the bottom of the hill. Eventually this will erode the surface.



THE UGLY

This section of road although recently repaired, is standing in water due to vertical stress caused by too fine a stone surface being used. When water has flowed over from the side ditch this has saturated the gravel resulting in ruts.

The next route inspected was from the "T" Junction again at 078615 through to High Skyreholme at 073608, and after some 0.3 of a mile at 077613 it was found to return to Tarmac at the top of the hill. The unmade road would benefit with "grips" or a side ditch to take standing water away.

From the "T" Junction to the Pioneer Quarry at the top of Greenhow Hill is approximately 7 Miles on this route back via the B6265.

CONCLUSIONS

Prior to carrying out this inspection I was aware of the TRO and, from all the publicity that has surrounded it's implementation, not having travelled the route since the 60's, I had envisaged the whole of it to be in a poor state of repair. As you will have gathered from the report the majority of the roads inspected are in very good condition and that ½ a mile requires re-instating. In most cases, this is as a result of the quality of their original construction and not through current maintenance.

Rumour had it that the eroded section had been started deliberately by person or persons unknown to stop vehicular activity on this road, but we found no evidence to substantiate this.

The original report to the Environmental Services Committee 03.09.99 suggested an estimated repair figure of some extraordinarily high figure to return this UCR to a satisfactory standard suitable for vehicle use. Even working on the old adage of £1Million per mile (plus an allowance for inflation) as the cost of constructing a Motorway, I find it difficult to come to terms with such a High figure for ½ mile of gravel surfaced Moorland Track regardless, of the amount of erosion, unless of course such a figure was suggested for other reasons of which I am unaware.

While one or two of the larger washouts look formidable, with modern machinery, some pipework and a relatively small amount of stone materials, this section can be repaired to a good standard in a relatively short space of time.

The Volunteer Labour would be able to carry out the marking out work, help with pipe installation and walling and could be used to stone up the smaller potholes over the whole route.

The Main Works are almost totally Machine Intensive and with the modern machine capacity should be time efficient, and I am sure that the reconstruction of this section of the road can be carried out at a fraction of the cost of the original Highways estimate mentioned earlier. I would suggest that the Yorkshire Water Contractor be approached to cost this work at an early date.

Implementation

There are several ways of reconstructing the roadway and joining up to the un-eroded Parts and a few are listed below.

Piling

The most expensive method would be to form each side of the roadway over the eroded sections with short lengths of plastic interlocking sheet piling allowing for suitable cross drains in way of the streams. The base in between would then be infilled with sub base stone over a membrane and topped off with road stone.

Apart from being expensive, this would be a noisy operation to install and would be visually intrusive in these natural surroundings.

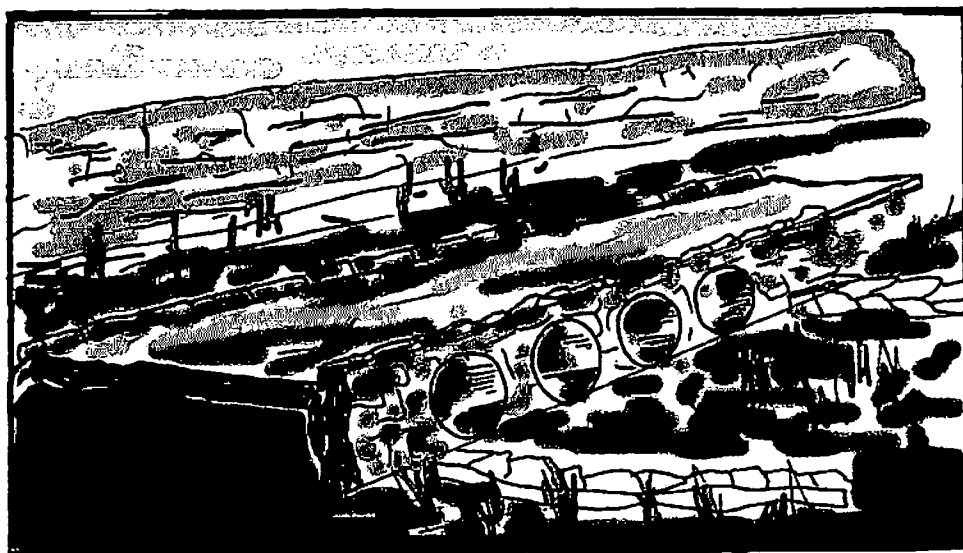
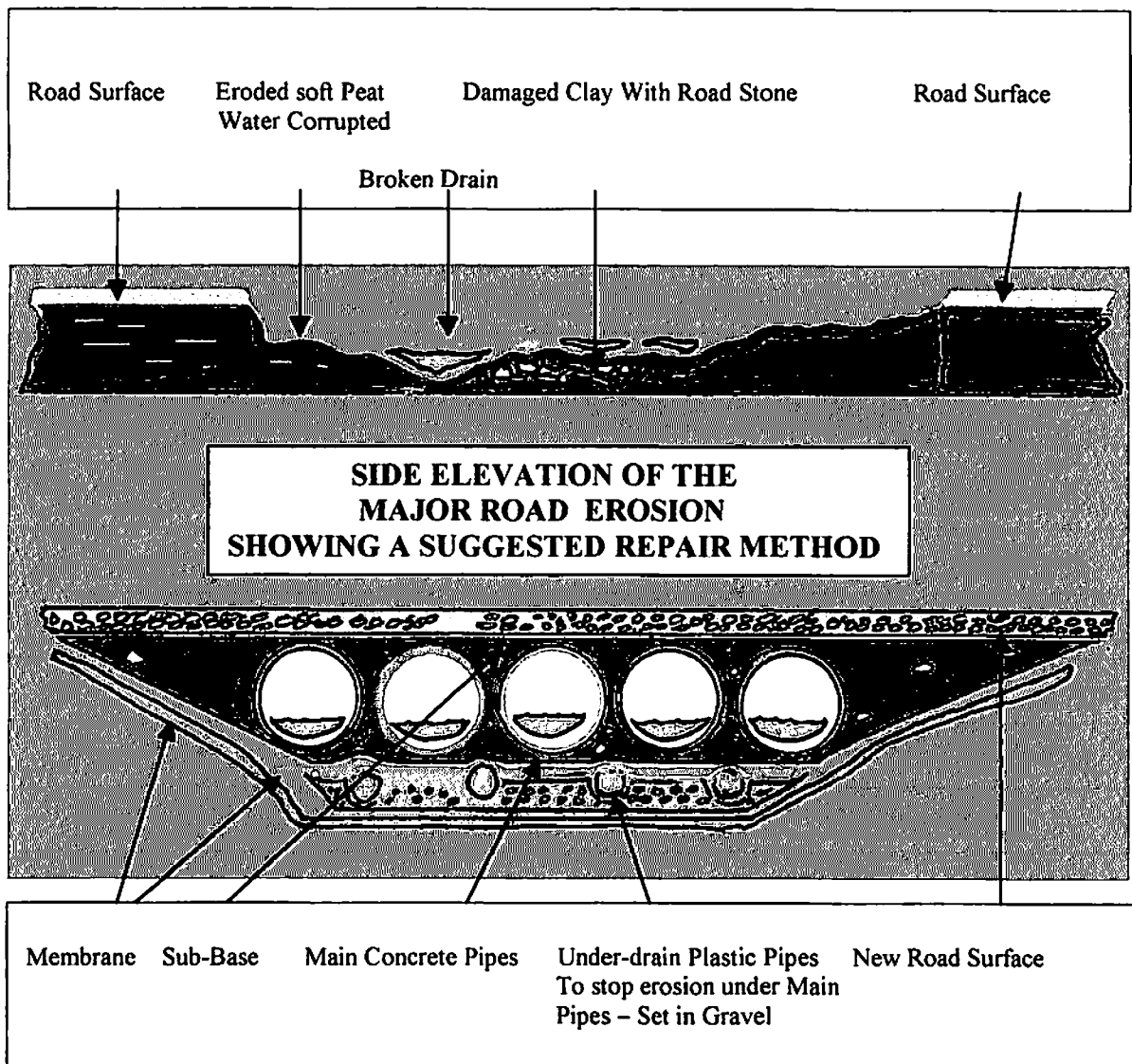
Stone Gabions

A method of forming the road sub-base would be to lay stone gabions (pre-formed stone filled wire cages) over a membrane, and finishing off with a road stone surface. This would bring the eroded surface up to the level of the existing route, but the weight of stone would possibly be excessive as well as difficult to install. Substantial pipe work would still be needed to cater for the free movement of water. This method would prove expensive.

Sectional Pipes

The most cost and time efficient method of raising the eroded sections, ensuring future drainage and routing for the existing streams, would be to use concrete (or steel) pipe sections at 90 degrees to the road, spanning its total width, forming a miniature multi-arch span. The Water and the Council Authorities may already have a number of these surplus to requirements and possibly already accounted for in other previous projects. If this were the case, the supply of these would therefore only incur the cost of delivery. (Early indications show that this may be the case). These pipes are easy to move and install and reduce the amount of Bulk deliveries of Sub Base materials which would reduce the wear and tear on the approach route and, the amount of traffic through the local area.

The Main pipes would span the road over a membrane and gravel base, possibly under-drained with smaller plastic pipe work to deter the possibility of being undermined by excessive flooding. The road surface would be laid over the pipes on a membrane if this was thought necessary. Each side of the newly installed road section could be finished with a dry-stone wall effect to blend into the surroundings.



Computer generated sketch of finished repair with Dry-stone facia each side

Drainage

As well as re-constructing the roadway, it will be necessary to form suitable side ditches and clean out the existing ditches to both sides of the road, to ensure free movement of water away from the route and to direct it to follow its natural course to the streams in the valley below. In the main re-instated areas, the newly formed side ditches may need a plastic membrane over a short length to avoid future erosion where the ditch joins the cross drains.

Surface

Once the eroded sections are re-instated, the existing, remaining road can be scraped, graded and re-surfaced over the affected length as required.

TIME SCALE

Subject to Contractor availability and to funding from those able to contribute to this project it would be advantageous to start this work as soon as possible.

Possible Contributors are:

Yorkshire Water
The Trail Riders Fellowship

Vauxhall Off Road Club
North Yorkshire County Council

Volunteer Groups: ARCV with assistance from LARA. TRF, AWDC, BTCV

I understand that the Ramblers Association is concerned about the condition of the North Yorkshire System of Footpaths and Ancient Roads. Perhaps, they could be persuaded to offer Volunteer Labour or a Financial Contribution towards this and similar Projects, to the benefit of their Nation Wide Membership.

A couple of happy Ramblers on Pockstones Moor wished the Project Surveyors Well as they ventured through the erosions.





YOU SHOULD BE
ABLE TO GUESS THE
CAPTION BY NOW!

YOU'VE GOT IT

BLOCKED DITCHES
CREATE STANDING
WATER ON THE
ROAD.



SUGGESTED EQUIPMENT

One 360 Degree Excavator

This to be used for all main side ditching and “gripping” work. Road scraping, road route preparation, cross draining where required. The cross concrete pipe installation and the smaller plastic pipes below these on each washout area would be installed with this machine and it would also be used for the sub-base and top stoning work.

Dumpers or Shawnee Pool's (Tractor/Trailer)

At least two of these would be required to run stone and other materials onto the work area from a suitable dump site and, for carrying in the pipes etc.

JCB/Loading Shovel/Excavator

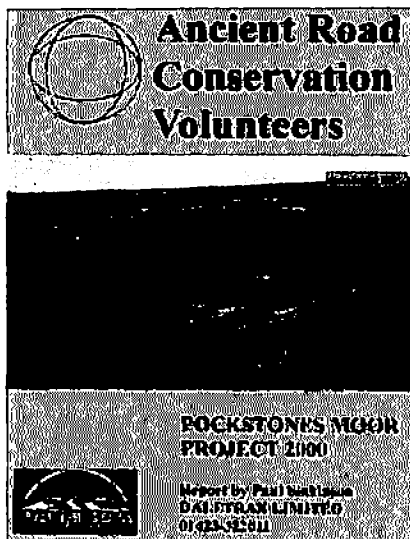
A loading shovel would be required to load the dumper vehicles.

Tipping Sites

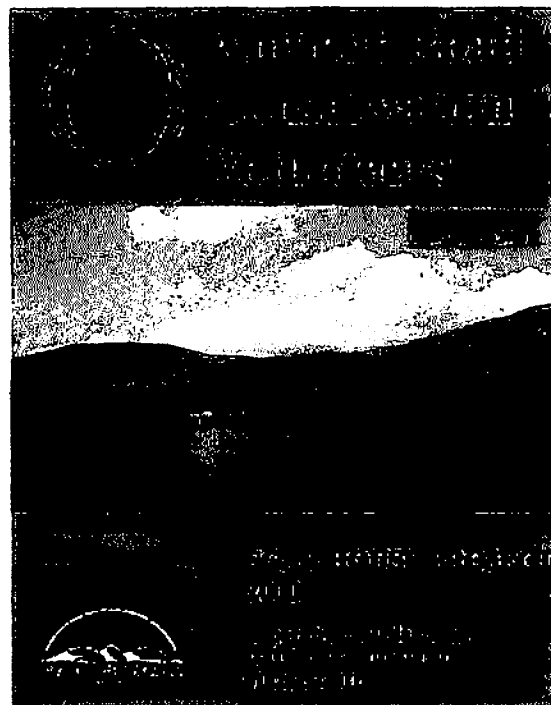
A suitable area would be required to tip the road stone materials by lorry as close to the work area as possible, and a similar site on the work-site itself.. It may be necessary to provide a stone base turning area for these vehicles.

Volunteer Vehicles.

These vehicles would consist of 4 wheel drive vehicles with or without trailers and possibly a tractor and tipping trailer for the purpose of carrying and tipping road stones for pot holes etc.



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FOR THE BENEFIT OF ARCV &
"JOINT MANAGED SOLUTION" TEAMS ONLY**



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**THE REPORTS SHOWN
WERE ALL WRITTEN AND
PRODUCED AT MINIMAL
COST WITHIN TWO OR
THREE DAYS OF THE ROUTE
INSPECTION**

**FOR FURTHER DETAILS CONTACT
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"JOINT MANAGED SOLUTION" TEAM, WITH THE ASSISTANCE OF BRIAN LEWIS OF THE AWDC.



THIS PHOTOGRAPH IS OF A DALETRAX LIMITED LANDROVER 90 TDI

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