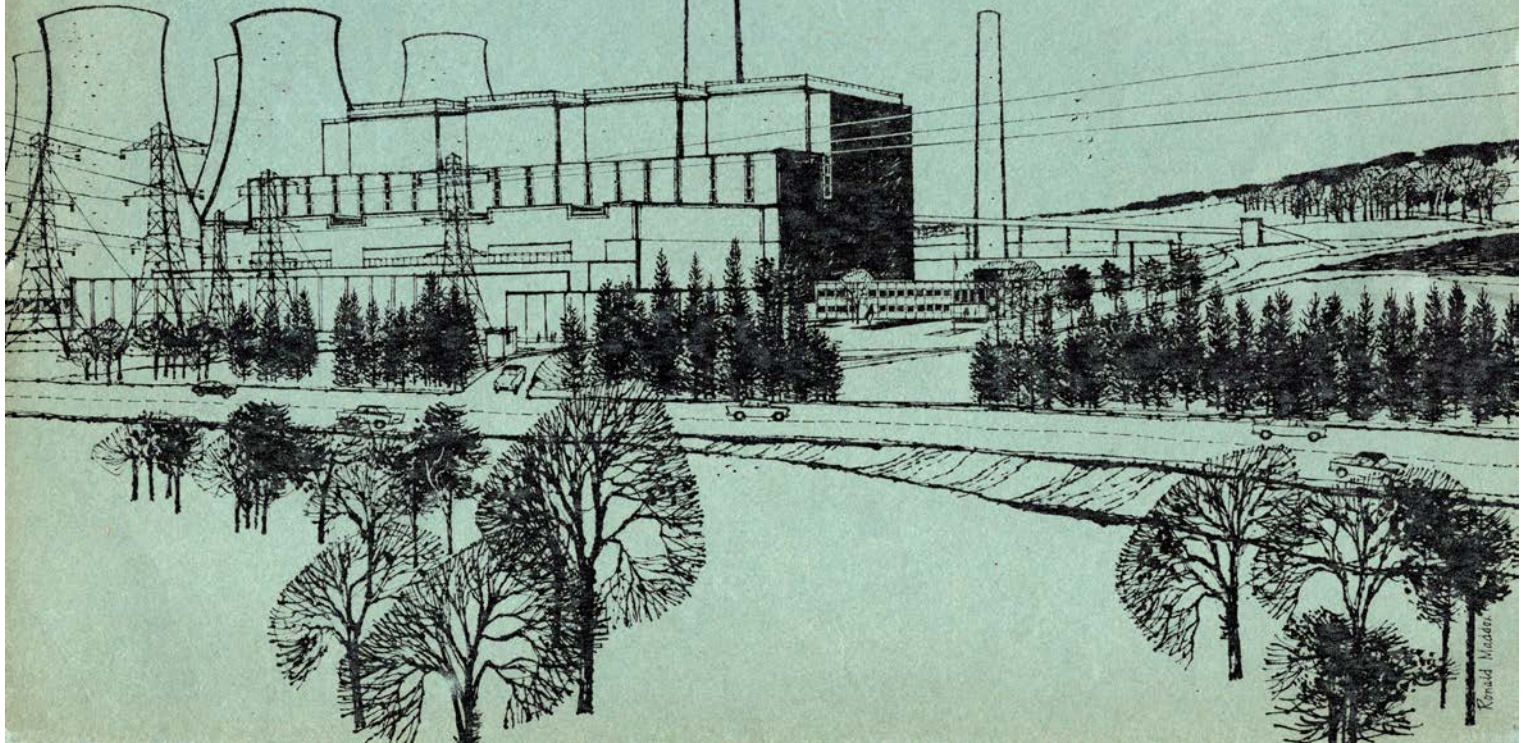


# RATCLIFFE POWER STATION

## Final Landscape Report

by Gordon Patterson DIP.L.A. A.I.L.A.

September 1964



Kenneth Maddox

RATCLIFFE POWER STATION

FINAL LANDSCAPE REPORT FOR THE  
CENTRAL ELECTRICITY GENERATING BOARD

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SEPTEMBER, 1964.

## 1. SCOPE OF REPORT

The purpose of this report is to present the principal detailed landscape proposals which it is felt should be carried out as part of the overall Power Station layout at Ratcliffe on Soar; proposals which are not only confined to the land within the station boundary, but which also extend beyond its immediate boundary fence, insomuch as the proposals are concerned with the satisfactory integration of a large industrial undertaking in the countryside as a whole. These proposals are concerned therefore with the total appearance of the landscape in and around the station. They take account not only of what should be done and how it should be done, together with its probable cost, but also as to how the landscape work should subsequently be maintained so as to produce not only a satisfactory landscape from the point of appearance but also a satisfactory one from the point of upkeep.

This report follows the Preliminary Landscape Report submitted in April 1963.

The report includes the following Plans and Drawings:-

1. Landscape Block Plan
2. Regional Plan with Transmission lines
3. Cross Sections of the Site
4. Perspective sketches
5. Detailed drawings
6. Phasing programme plan

## Key to Plans and Drawings

- 1.1. Landscape Block Plan: This plan shows outline proposals for all the principal landscape elements of the site. It does, however, exclude some details beyond the immediate environs of the site. These are indicated upon a smaller scale plan (Regional Plan) which also shows the general impact of the station on the area.
- 1.2. Regional Plan: This plan shows the proposed undergrounding or re-routing of Power Transmission Lines to and from the station and also gives the general visual implications of the proposed new transmission lines on the site at large.
- 1.3. Cross Sections of the Site
- 1.4. Perspective Sketches from:
  1. Main Road SE. of Station
  2. Main Road SW. of Station
  3. Red Hill Rail Tunnel
  4. Thrumpton Ridge
- 1.5. Detailed drawings:
  1. Earth works of slope beyond station buildings and coal store. (2 drawings).
  2. Earth works between County Road, coal store and embankment to County Road. (Nottingham-Ratcliffe).
  3. Earth works at Bridge approaches alongside County Road to Motorway.
  4. Amenity area. Treatment and planting.
- 1.6. Phasing programme plan: coloured to show the anticipated stages of development.

## 2. PROPOSALS

### 2.1. Grading - sub-contouring

The general grading proposals for the site are shown on the layout plan, from the contours and in the cross sections of the site. Whenever possible, running levels should be maintained so as to avoid embankments and cuttings. These are all difficult to maintain. This end, however, will obviously not obtain either in the case of the cut surfaces surrounding the coal store, or at the entrances to the tunnel through Red Hill. Here the rock face will stand but cannot be expected to take grass. The general recommendation concerning banks should, however, be followed as far as practicable in the case of roads and rail tracks. There are four particular areas in which grading will be of great importance:-

- 2.1.1. The ground to the north of the principal station - buildings and the coal store. The detail showing the proposed ground formation at this point has as its object the satisfactory visual seating of the station against the mass of Red Hill and the satisfactory visual integration of the outlines of Wright's and Cottager's Hills with the proposed platform on which the station will stand.
- 2.1.2. The **area** between the coal store and the Nottingham - Ratcliffe road should be graded so as to provide the maximum amount of visual 'cover' for the coal store as seen from the road.

## Grading - sub-contouring (continued)

2.1.3. The land adjacent the Motorway approach, (proposed new Railway Bridge) should be graded so as to provide the maximum immediate foreground 'height' at this point, since from here the impact of the station will be at its greatest and as much ground screening as possible should be achieved.

2.1.4. The ground either side of the main entrance way to the Station is to be planted but a satisfactory grading of embankment and provision of a berm either side of the road should be made.

## 2.2. Fencing:

Two distinct zones within the site boundary are shown, each with an enclosing fence:

Inner site zone

Outer site zone

This proposal has been put forward partly with the view towards integrating the ground pattern of the station with the surrounding countryside and partly so as to enable some of the land to be used for agricultural purposes. The principal consideration is that of enclosing the mechanical elements of the station from invasion by agricultural stock.

2.2.1. Inner site zone: It is proposed that the inner site zone be fenced with continuous mild steel hurdle fencing, 4'6" high. Provision should be made for gating, returning or providing stock-creeps where the fence line crosses road and rail tracks. This will be seen to occur at the following places:

2.2.1.1. main rail feed from north - hurdle fence to be returned along embankment to track.

## Fencing (continued)

- 2.2.1.2. terminal entrance road - gate to be provided to exclude stock from power station, alternatively, stock creep over road to be built.
- 2.2.1.3. main entrance-gate to be provided at gate-house (set back from main road).
- 2.2.1.4. loop return rail to south-crossing, no need for stock precaution at this point.
- 2.2.1.5. sewage unit road-crossing, no need for stock precaution at this point.
- 2.2.1.6. return rail loop to south-crossing, no need for stock precaution at this point.

Woodlands within this area should be fenced with timber post and rail.

- 2.2.2. Outer site zone: It is proposed that the outside zone be fenced with 4'6" 3-bar timber post and rail fence, but that where the line of fence corresponds with that of the inner zone, the bar fencing should take precedent.

Woodland within this area should be fenced with 3'0" post and wire rabbit-proof fencing, planted with a hedge of quickthorn.

## 2.3. Tree planting

- 2.3.1. On site planting. There are five principal areas of planting on the site.

Area 1. Adjacent Station chimney. This area should be planted with elm, ash and Scots pine, care being taken to preserve the existing mature elm standing on the site.

Area 2. The area adjacent the coal store which should be planted with beech and pine.

### Tree planting (continued)

Area 3. The area adjacent the road embankment which should be planted with Scots pine and sycamore.

Area 4. The area adjacent the station entrance which should be planted with larch, oak and sycamore.

Area 5. The area of the bridge approaches which should be planted with larch, oak and sycamore. Where overhead wires preclude the planting of forest trees, the area should be planted with *Cornus alba* and *Populus obtusa*. (Dogwood and Round leaved Poplar).

#### 2.3.2. Off site tree planting

In the Preliminary Landscape Report for Ratcliffe, 'off-site tree planting' was considered appropriate to Ratcliffe Village; the embankment to the new road; the Pump House area; and some reinforcement to the grounds of Thrumpton Hall; all with a view of meeting the County Planning Officer's request arising from the initial inquiry and the interests of the local inhabitants and landowners.

Subsequent to the issue of these general recommendations, the County Planning Officer expressed the opinion that a rather wider viewpoint might be taken of off site planting and that consideration should be given to additional planting to an area within a radius of say three miles of the Station. Concern for appearances of the Station from the village of Kingston on Soar had also been expressed by Lord Belper, of Kingston Hall.

In consideration of each area in detail, however, the following recommendations are now considered adequate.

2.3.2.1. Ratcliffe Village. In that the visual impact of the station upon the village will be very considerable, maximum advantage should be taken to plant the ridge immediately to the east of the village, between Home Farm and the railway. This area, together with the spinney in the vicinity of **Northend Bridge**, should be planted up as a broad belt of **conifers** and mixed hardwoods, following general forest practice with Scots pine, oak and sycamore. Similarly, the 'truncated areas' to the south of the proposed Nottingham-Ratcliffe road, in the vicinity of Sheppard Plantation should be planted to provide cover for the station from both Ratcliffe and Kingston on Soar as seen from a more distant viewpoint. In addition, and in the interest of particular local inhabitants, the planting of some individual trees might seem appropriate within the village, say chestnut, and within fields adjacent Sheppard Plantation - Turkey Oak. An area of land to the east of the coal store, although 'off the site' is nevertheless within the Board's ownership. It should be planted with beech and pine.

2.3.2.2. The embankment to the new road. Whilst a view of the coal store is inevitable from the higher reaches of the Nottingham-Ratcliffe road, screening can be effected by planting upon the embankment adjacent the coal store and by associating this with additional planting in the truncated areas in the vicinity of Winking House. A sense of enclosure can be created around the road, thus providing a visual diversion at this point. Planting should be of **conifers** and mixed hardwoods, Scots pine and sycamore, either in plantation or as individual specimen trees.

- 2.3.2.3. Pump House Area. The existing beech 'hanger' in the vicinity of the proposed pump house should be reinforced by underplanting with additional beech and a plantation of ash should be made close to the earth flood embankment; the existing slight mound at the end of the broad vista from Thrumpton Hall towards Trent lock. This will provide a screen for the Pump House, as well as the Railway Bridge as seen from the house.
- 2.3.2.4. Reinforcement to the grounds of Thrumpton Hall. The skyline of Red Hill provides an important backcloth to the Station, and the preservation of existing trees should be reinforced with plantations of ash to give a continuous belt of trees along practically the whole of the northern boundary of the station site.
- 2.3.2.5. Offsite planting within a limit of three miles. In general terms distant planting from the site would have to be in broad belts rather than as individual trees or clumps of trees, if it were intended to provide anything by way of an effective screen. In fact it is felt that a complete screen is neither desirable or indeed necessary, at this distance. There would seem to be obvious cases where no screen is called for at all, either because the station cannot be seen from a number of directions, (i. e. Thrumpton, Gotham) or because distant views are acceptable under certain circumstances, (i. e. Lockington, Hemington) where the elements are seen across the flat valley of the Soar. The distant views of Castle Donington Power Station are entirely satisfactory seen above pastures and willow trees in the opposite direction. The least satisfactory aspect, in this respect, is perhaps from the south, as seen from

## Offsite planting within a limit of three miles (continued)

### Kingston on Soar.

Considerable foil is provided already, however, by the woods of Kingston Spinney, and Moorwood, and some ornamental planting at Hill Cottage on the line of the Gotham-Kingston road. A complete screen would be dependent upon linking these three areas, above the 125' contour, into a continuous belt. Whilst this would not necessarily be out of character, especially in view of the pine plantations to the east and south of Kingston Hall, it would mean the loss of agricultural land to forestry, which is unacceptable to local landowners. As an alternative, some additional specimen or clump planting might be made upon the 125' contour to the north of the entrance to Kingston Hall, an area which already has a park-like quality, though even this has not been welcomed for similar reasons. Some improvement in the scene may be expected when part of the existing Staythorpe to Drakelow (275kV.) transmission line is dismantled. Planting of the three mile limit is therefore not recommended. At all events, existing woodlands and spinneys should be re-stocked, whenever possible, by local landowners in order to maintain the fair measure of existing enclosure surrounding Kingston village and the site generally.

## 2.4. Undergrounding 132 kV Transmission lines - routing 400 kV lines.

### 2.4.1. 132 kV Transmission Lines

In the Preliminary Landscape Report it was recommended that 'undergrounding' of the existing 132 kV lines, or part of them, should have as its principal objective, a reduction

## Undergrounding 132 kV Transmission Lines (continued)

in the visual confusion produced where more than one line of towers is seen in conjunction with another, or where lines cross each other. In considering each line in detail therefore, the following recommendations are made for each existing 132 kV Transmission line.

### 2.4.1.1. SPONDON LINE 66 kV.

Ultimately, (after 1969) it would appear that this line will become of little or no importance, but more immediately, it is to be used for a working supply to the site (33 kV) and should be retained. A terminal tower, immediately to the west of the railway line will be required for this purpose. As this is an isolated line, there is no great visual objection to it, although ideally, the line would be best terminated upon the knoll west of Red Hill Farm.

### 2.4.1.2. NOTTINGHAM LINE 132 kV.

The main objection, on visual grounds, to this line is that it over-rides the skyline of Wright's Hill. To obviate this objection, it is recommended that the existing line is put underground from a terminal unit point at the present tower No. AM/AO 35 the sealing compound itself sited behind the existing spinney.

### 2.4.1.3. WILLOUGHBY LINE 132 kV.

This is also a line which over-rides the hill above Stone Farm, and it is recommended that it should be stopped at tower No. AOT7/AMT9 on the Willoughby line. This will remove the existing crossing with the 275 kV line (even better, to take it back one additional tower)..

#### 2.4.1.4. LEICESTER LINE 132 kV.

The existing Leicester and Coalville line runs in close proximity to the proposed 400 kV lines, three of which will run into the station site on the S.W. side. It is recommended that this line be taken back to tower AM/AO45 and taken underground from that point, thus helping to resolve the visual duality produced by differing sized towers running parallel to each other, of which there need to be two sizes of 400 kV. towers already.

It is noted from drawing No. RA/64/O2 that the proposed 400 kV line from Castle Donington crosses the 132 kV line from Donington to Coalville and Leicester east of Tiny Cottage, and although it is true that this is well clear of the site, the visual aspect here is not entirely satisfactory.

#### 2.4.2. 11 kV Lines

In addition, there are a number of 11 kV lines which cross the site. It is not clear at the moment whether any of these are objectionable on visual grounds, (because of detailed engineering considerations, roads as yet incomplete) but those most likely to prove so in this respect are the ones which occur in relation to the Nottingham-Ratcliffe Road on the south side of the station.

The proposals are shown on the accompanying **Regional** plan. Scale 1.25000.

#### 2.4.3. 400 kV transmission lines

At the time the Preliminary Landscape Report was prepared only general information upon the 400 kV transmission lines was available. The general requirement was for a break in to the existing 275 kV line from Staythorpe-Drakelow and

#### 400 kV transmission lines (continued)

the provision of two additional lines running out from the station to the S. W. The length of 275 kV line between the turning points into the station was to be removed. It is now understood that detailed proposals for the three lines running S. W. are to be run in accordance with drawing No. 24/549, (C. E. G. B.) and that the existing 275 kV Staythorpe to Drakelow line is to be turned into the station site at tower No. 2D 132 in the vicinity of Winking Hill. The existing high tower No. ZD 131 on the Castle Donington to Drakelow line should be lowered. In considering these proposals, the following observations are made:-

- 2.4.3.1. that having regard for the height of the towers (190' nominal) no very significant difference will be apparent when the towers are seen from Ratcliffe Village, as to whether they are sited adjacent the railway line or whether they are sited 100 feet back from it, this being the order of the advantage tolerance.
- 2.4.3.2. that there is generally advantage in the lines running straight from the station to a point where the line is to cross the railway.
- 2.4.3.3. that the smaller of the towers should be closest to Ratcliffe Village, and that the three towers should be triangularly placed and should preferably be all set with their cross arms parallel.
- 2.4.3.4. that towers in any one line of run should be preferably of the same height.
- 2.4.3.5. that in the case of the turning-tower to the east of the site on the Staythorpe line, the turning-point would be

#### 400 kV transmission lines (continued)

better at tower No. 2D 133 than 132, as shown, because of the visual proximity to Winking Hill and because of the advantage gained from its possible association with the existing woodland of Kingston Spinney.

#### 2.4.1.5. Motorway Approach Road and Nottingham-Ratcliffe Road

Great importance is attached to the appearance of the Station from the Motorway approach road and particularly from the bridge, since from here, the station will probably produce its greatest impact. Advantage is being taken of the contours both existing and proposed, to provide as much visual 'cut off' at ground level as is possible. Trees planted close to the road should achieve as much in the way of 'scale' as is possible, from this point, with cooling towers showing up well above them. Further away from the bridge, when the impact of the cooling towers is immediately passed, it will be necessary to drop the height of planting where the transmission lines pass over the road.

The main South elevation of the station will attract attention from the middle reach of the road and should be seen in open view, framed by overhead wires and flanking trees.

Further enclosure is provided by the planting in the region of the main station entrance. Planting will also obscure the sewage disposal unit.

#### 2.4.1.6. Amenity areas and surfacing round generating plant

Generally the ground in the immediate vicinity of the station should be hard paved.

### Amenity areas and surfacing round generating plant (continued)

All areas adjacent the generating elements of the station should be surfaced with crushed marlstone and grey limestone. There should be no grass areas adjacent these buildings. The area surrounding the amenity and administrative block should be paved in concrete, brick and stone. Decorative planting, in accordance with the drawings provided, should be confined either to the areas within the building - (patio, courts, etc.) or immediately adjacent the walls of the office buildings and car parks.

#### 2.4.1.7. Pump House area

The Pump House area generally will be seen from the river only, but the impact both from the railway and Thrumpton Hall, though slight, must be reduced to a minimum. The tunnel entrance should be as small as possible and existing mature trees should not be disturbed. The ground works and outfall structures should be as simple as possible and steel work should be painted black or dark grey. A screen at the end of the Broad Walk in the form of a large triangular plantation of Ash should be put in and some underplanting of the existing beech both at this point and above the tunnel opening should be carried out.

### 3. IMPLEMENTATION

Some landscape work has already been carried out, following the proposals in the Preliminary Landscape Report. It is suggested generally that work should be carried out by a competent specialist landscape contractor and that he be invited to undertake the work by competitive tender. The work would also best be undertaken under the aegis of the General Contractor responsible for the station so as to obtain the best possible co-operation and programming. It is probable that the landscape constructional work might best be carried out by the building contractor responsible for the administrative building, though even this might be managed by a landscape firm if a particularly high standard of paving work were required.

Planting work should continue as quickly as possible wherever sites are available. In this respect, those areas of land off the site which are earmarked as woodland, should be obtained for this purpose as soon as practicable. It is suggested that the top soil north of the cooling towers should be used for soiling the site generally; that the top soil in the region of the Old Railway Bridge be abandoned and used for building up levels at this point; that the top soil in the vicinity of the main entrance should be used for making up levels in that area, (together with such fill from the 'Remains' area as may be necessary) and that the area of top soil adjacent the borrow pit be used for shaping and contouring the north bank.

It is tentatively suggested that the programme of landscape work might be as follows, remembering that this type of work is of a seasonal nature and must be carried out generally during November - March, depending, however, very much on weather: -

- |             |  |
|-------------|--|
| 1964 - 1965 | Continuation of off site forest planting on sites as and when available.       |
| 1965 - 1966 | Final shaping of north bank and planting of woodland in this area.             |
| 1966 - 1967 | Construction work of amenity area, continuation of site planting and grassing. |
| 1967 - 1968 | Continuation of site planting and grassing on sites as and when available.     |
| 1968 - 1969 | Continuation of site planting and grassing.                                    |
| 1969 - 1970 | Completion of site planting at S. E. of site and final grassing.               |

#### 4. MAINTENANCE

The nature of landscape work is such that it has to be cared for after construction, that is, if it is to survive, flourish and reach maturity.

Although the proposals being put forward take this very much into account, and future work should be reduced to a minimum, nevertheless some maintenance is inevitable.

Generally, skilled labour will not be required and gardening work will comprise principally of cutting the grass, tidying and keeping down weeds. Some provision has been made for flowering plants and this is the only item of recurring cost. The flowers will, of course, require some slight horticultural knowledge.

The only other element of the landscape layout requiring specialist advice is the woodland. It is felt that these areas would best be managed by a firm of forest contractors, since they will require timely treatment over a number of years until, and even after, they have become established.

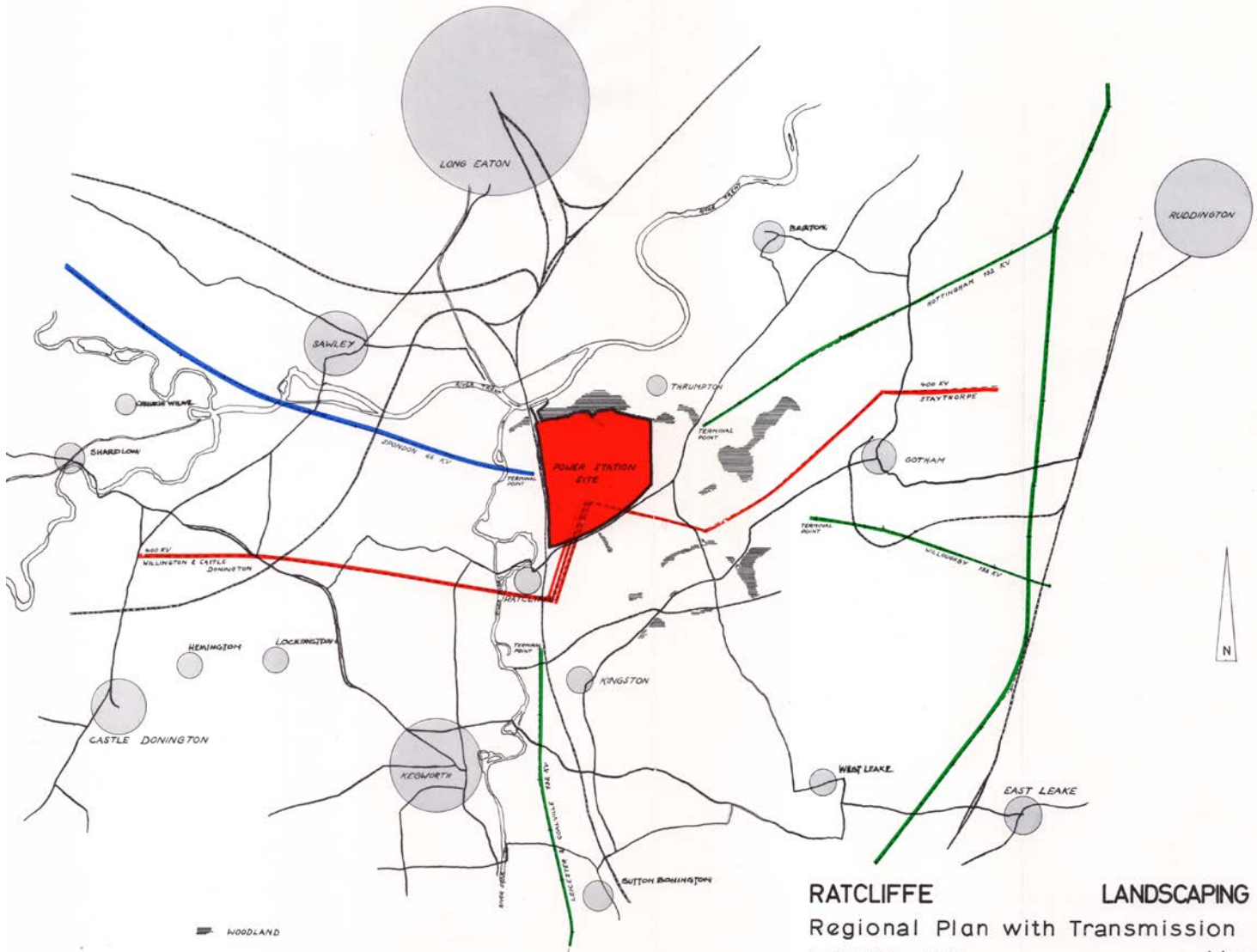
The maintenance work, therefore, would seem to lie within the capabilities of one man, so far as the station itself is concerned, and would fall within the care of a local contractor, with some later chance of a produce return, in the case of the woodland. Maintenance work is already necessary in the case of the trees planted this year, though maintenance work generally is not likely to reach significant proportions until the summer of 1967.

The estimate of costs which follows, includes some items which are probably already taken for as part of the general station site works, and if these are deducted they account for about half the total figure. The prices upon which the estimate are based are for a reasonable standard of work and workmanship, though it should be said that in view of the fact that unit rates have been applied over relatively large quantities in some items, the figures may show some variation in reality. It must also be stated that the condition in which the site will be left to the landscape contractor will have a significant bearing on pricing.

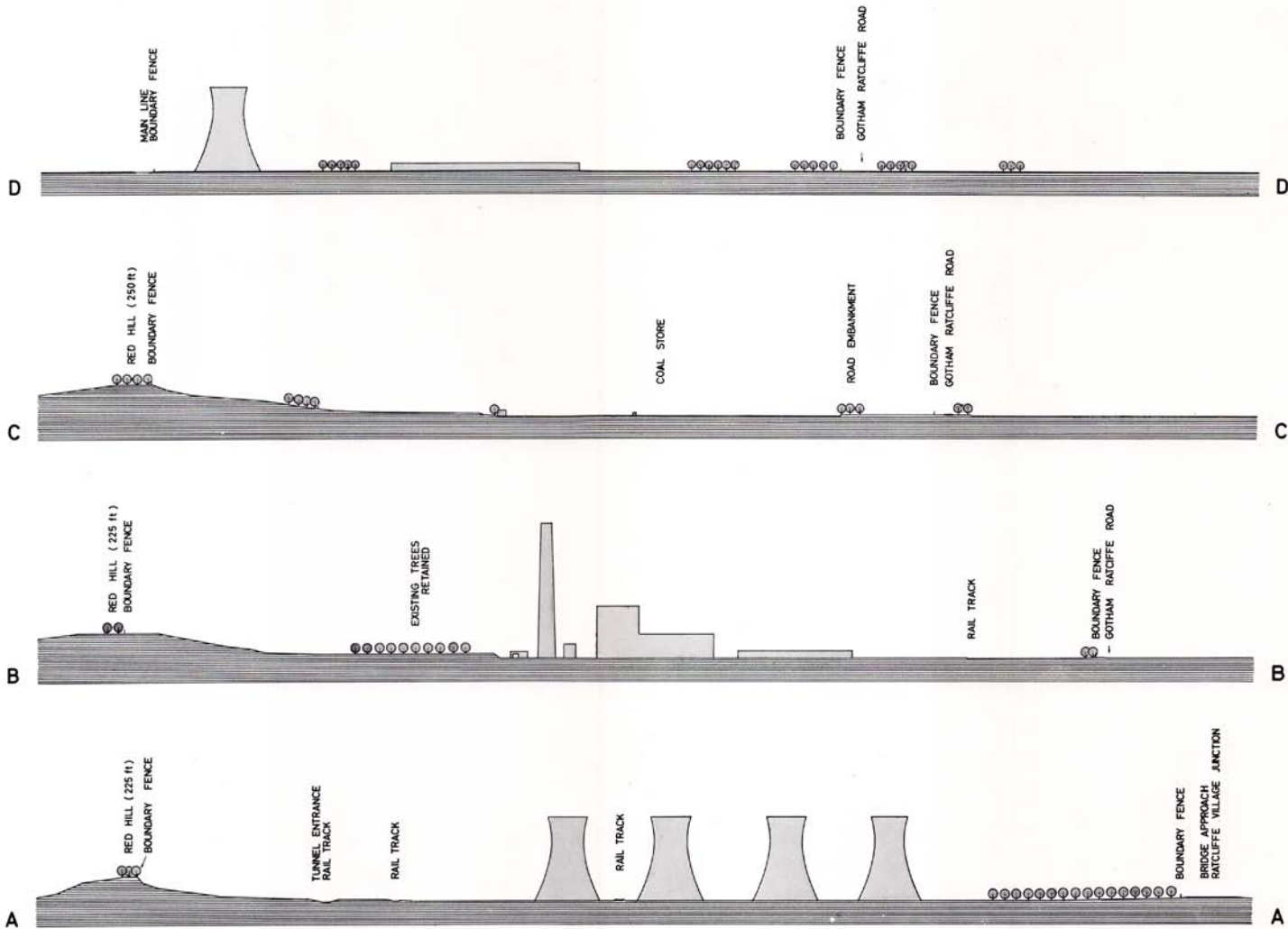
Station boundary	1,500 yds. @ 20/-	30,000. 0. 00.
Woodland boundary	4,000 yds. @ 10/-	40,000. 0. 00.
Station boundary	4,000 yds. @ 10/-	40,000. 0. 00.
8. Tree planting	40,000 @ 10/-	40,000. 0. 00.
9. Grass Planting and Hedges	40,000 yds. @ 10/-	40,000. 0. 00.
10. Clearing	40,000 yds. @ 10/-	40,000. 0. 00.
		<u>100,000. 0. 00.</u>

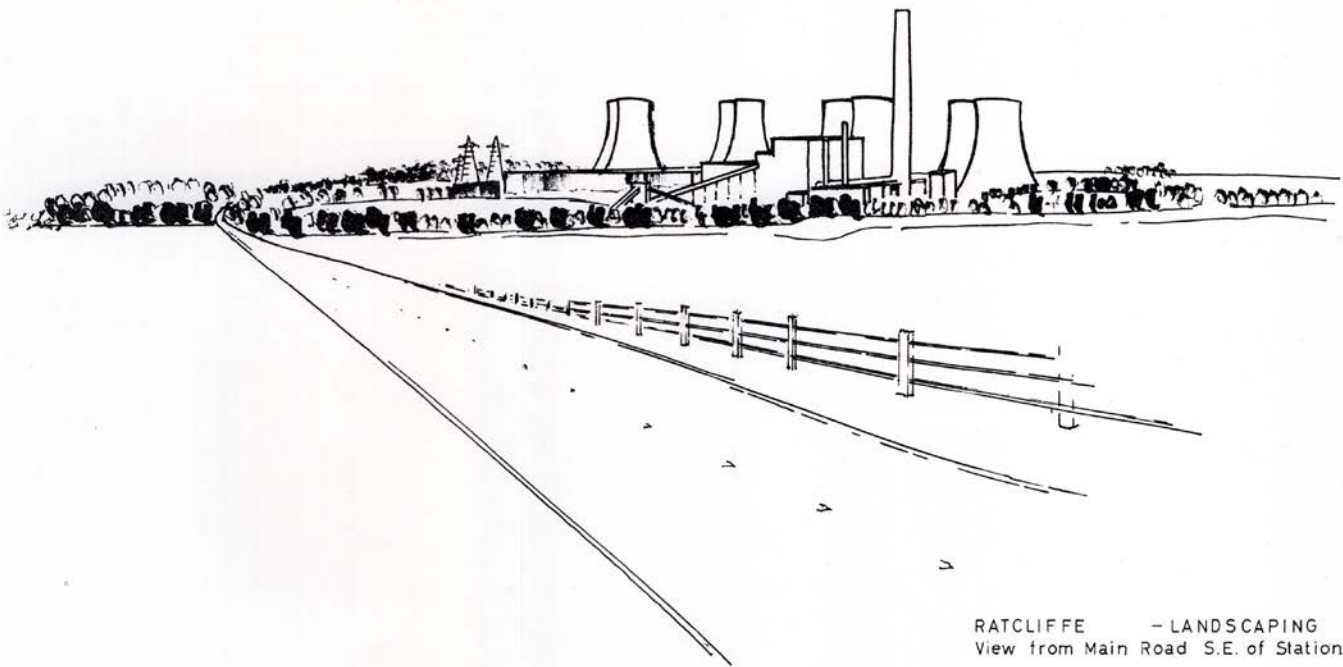
Note: This estimate of implementing the proposals for planting grasses on lines and sub-grounds, within existing lines and not included in this estimate.



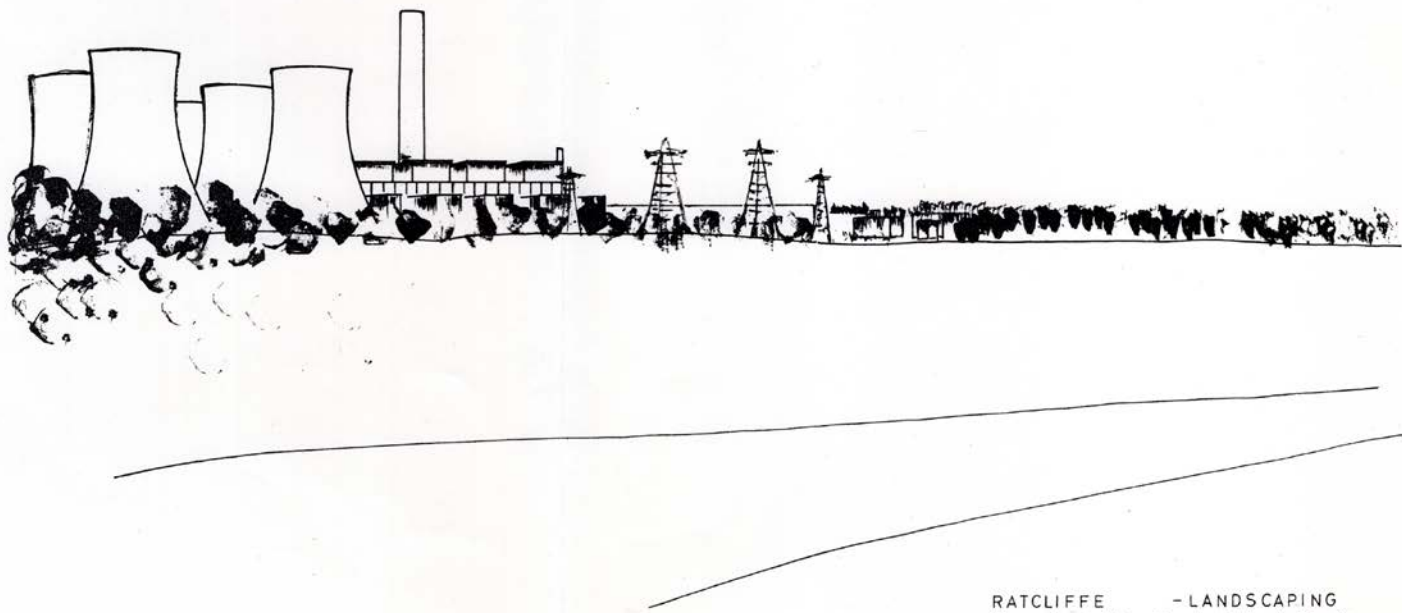


**RATCLIFFE LANDSCAPING**  
 Regional Plan with Transmission  
 Lines  
 G. PATTERSON 7. 9. 64

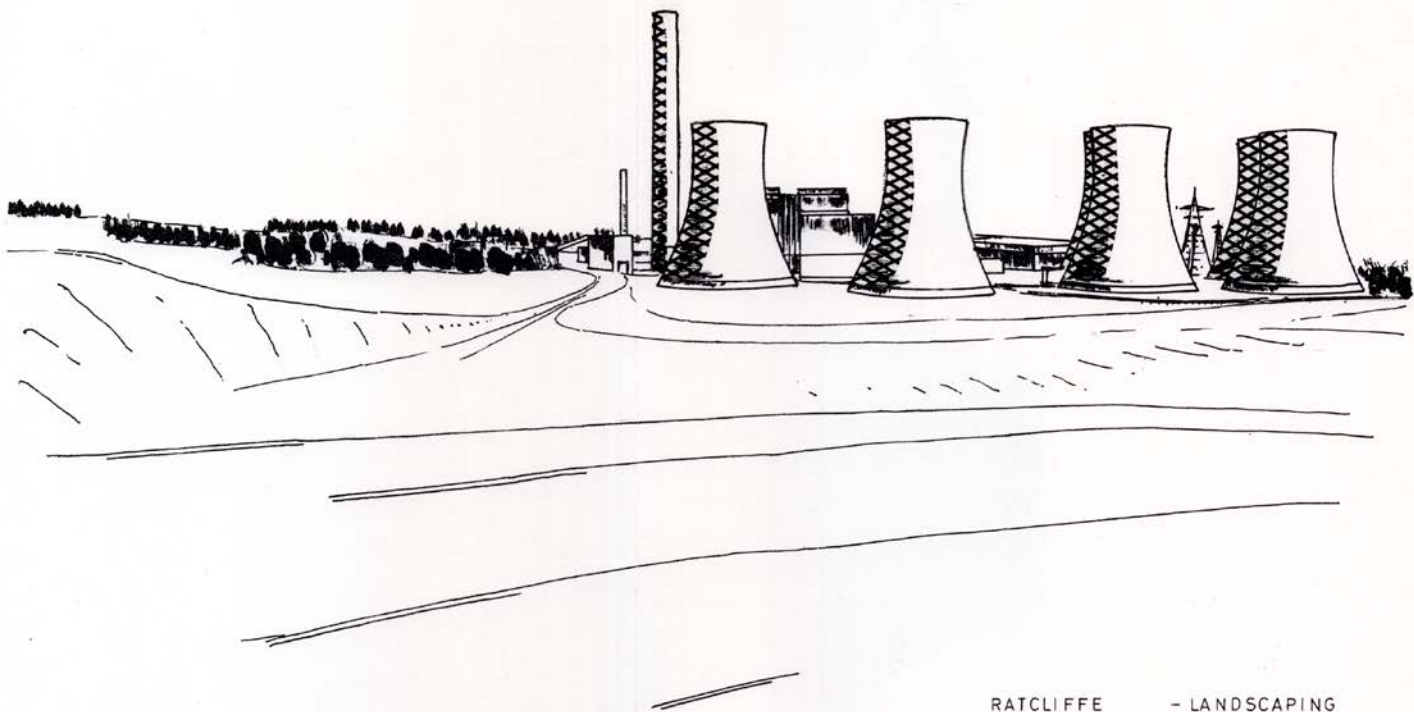




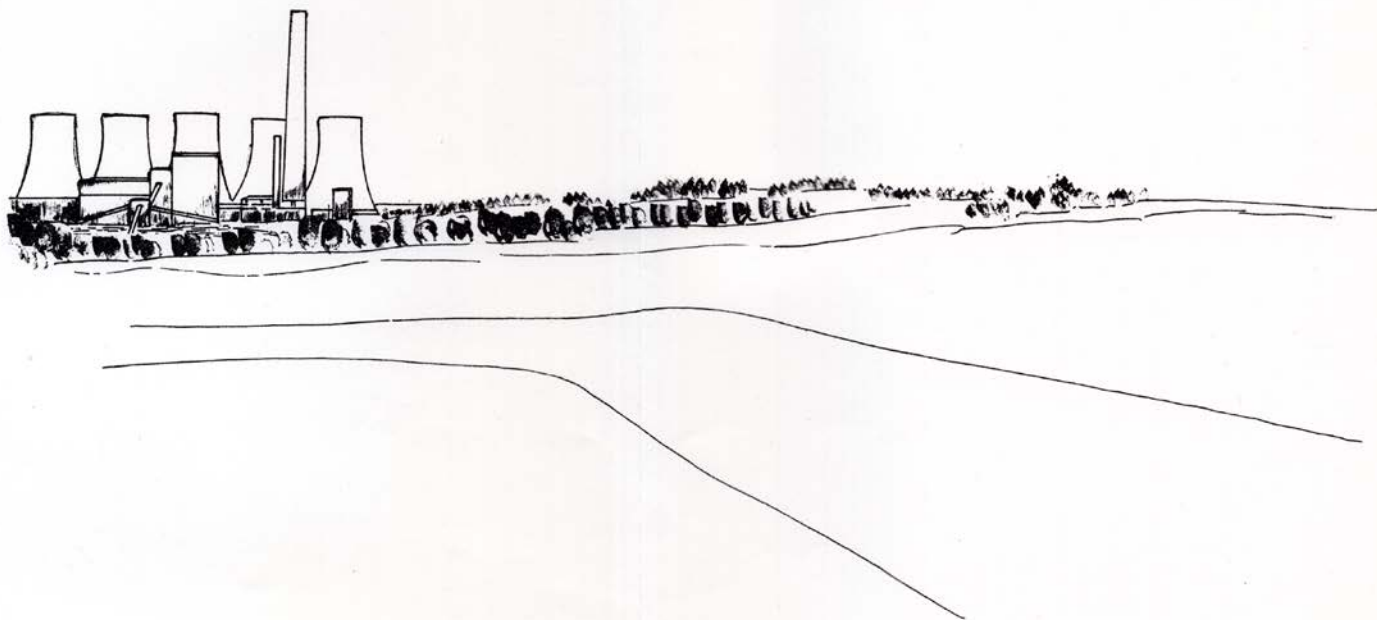
RATCLIFFE - LANDSCAPING  
View from Main Road S.E. of Station



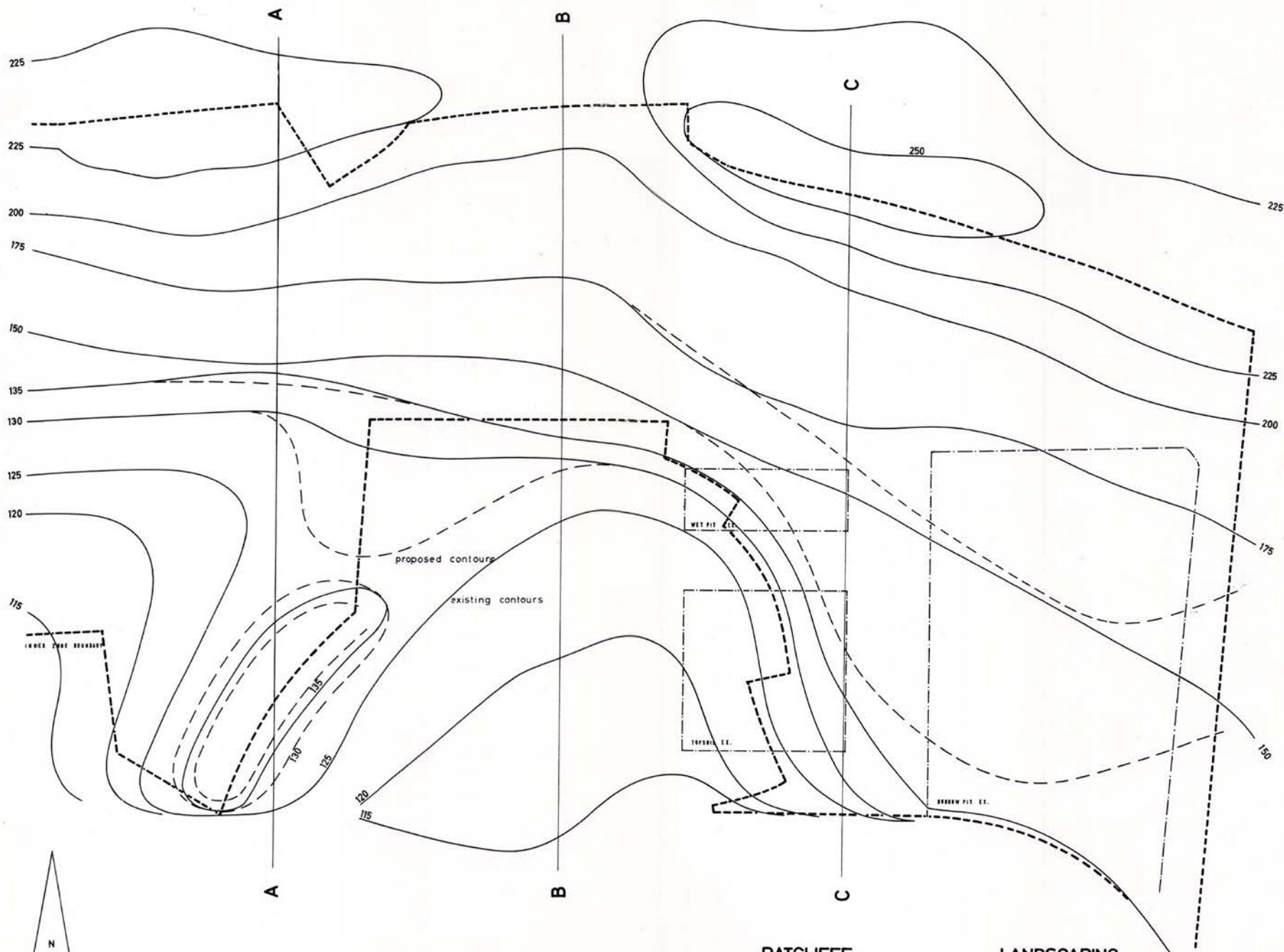
RATCLIFFE - LANDSCAPING  
View from Main Road S.W. of Station



RATCLIFFE - LANDSCAPING  
View from Red Hill Rail Tunnel



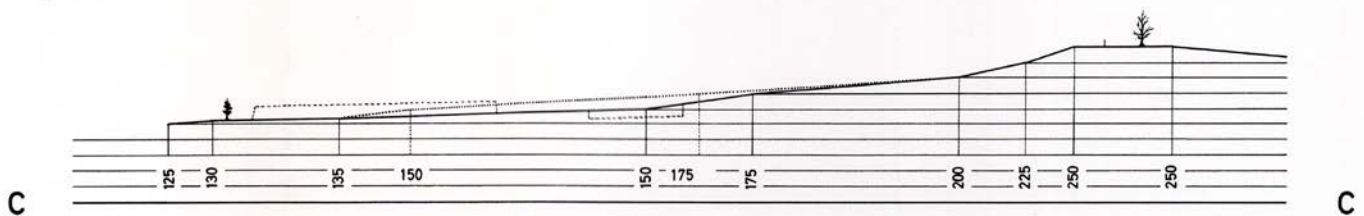
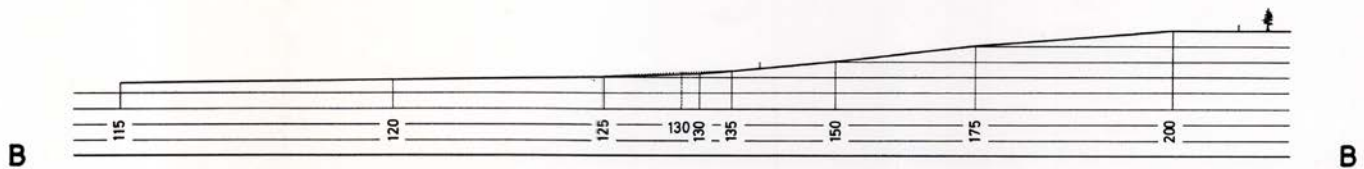
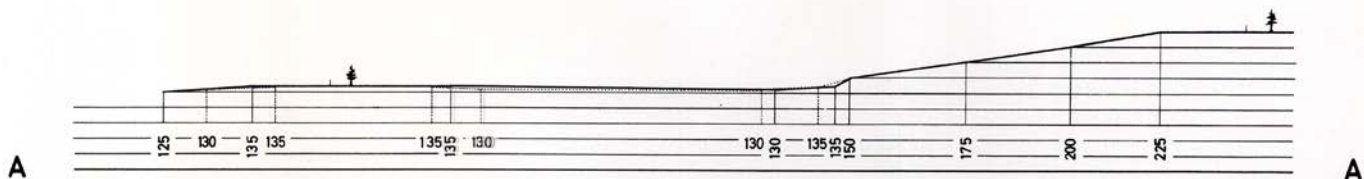
RATCLIFFE - LANDSCAPING  
View from Thrumpton Ridge



**RATCLIFFE LANDSCAPING**  
**Earthworks of North Slope Contours**

GORDON PATTERSON

17.9.64



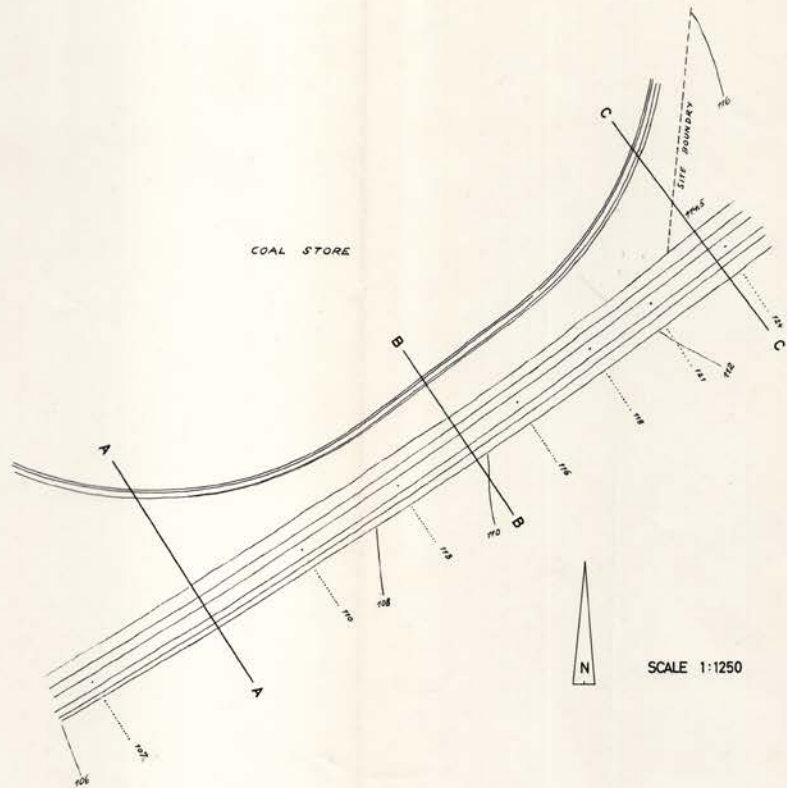
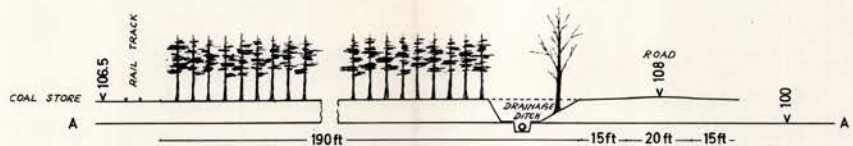
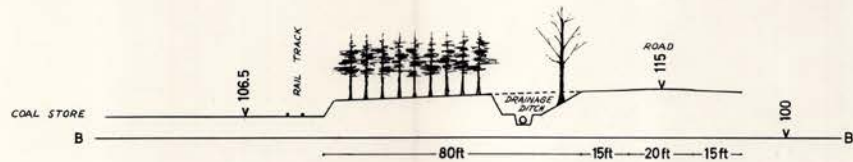
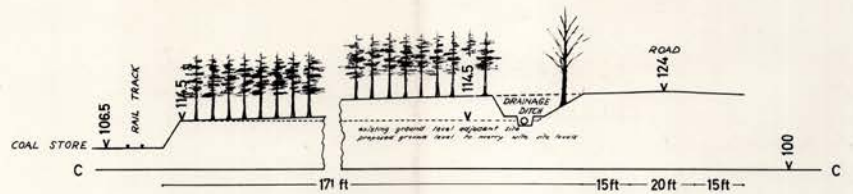
RATCLIFFE

LANDSCAPING

Earthworks of North Slope. Sections

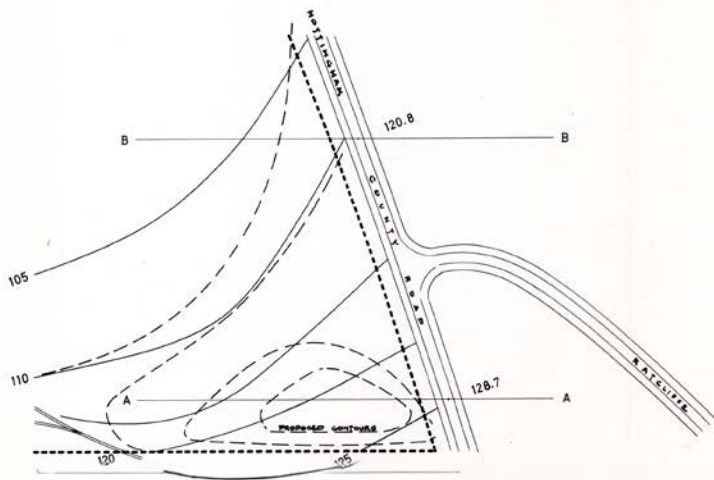
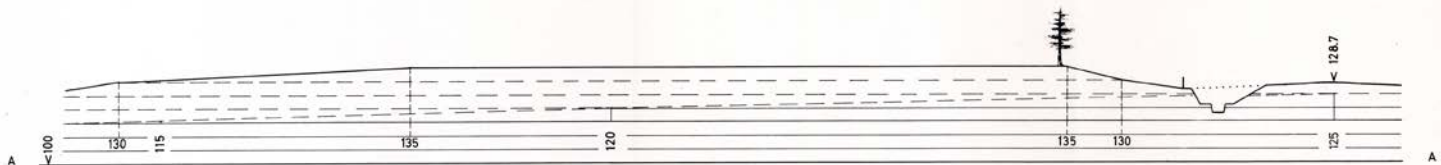
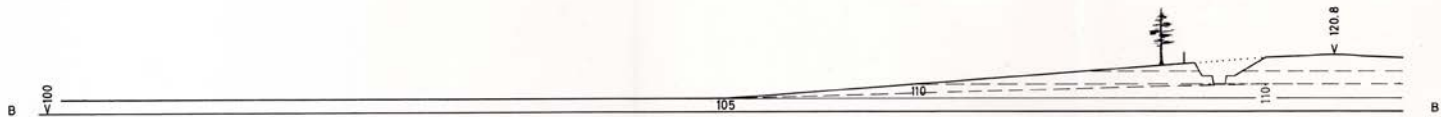
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19. 9. 1964



**RATCLIFFE LANDSCAPING**  
**Earthworks between County Road and Coal Store**

GORDON PATTERSON 9.9.64



**RATCLIFFE LANDSCAPING**  
**Earthworks at Bridge Approach**

GORDON PATTERSON

30. 9. 1964



# RATCLIFFE ON SOAR

*M. Landy*

- 1965
- 1966
- 1967
- 1968
- 1969
- 1970

