THE HISTORY OF

BRANDON CENTRAL DEPOT

B GRIGGS

VOLUME III

VOLUME III

CONTENTS

16. APPENDICES

APPENDIX 11a

WORK STUDY BRANCH

E(E) WORK STUDY TEAM REPORT NO 47 TO CONSERVATOR E(E)

BRANDON CENTRAL DEPOT

PHASE ONE REPORT

Ref: 040/7/20

Contents

Distribution: Conservator E(E) - 12
Mr A R Sutton, H&M Division
Chief Work Study Officer
Work Study Team Leaders
Work Study Library

E(E) WORK STUDY TEAM REPORT NO 47 TO CONSERVATOR E(E)

BRANDON CENTRAL DEPOT

PHASE ONE REPORT

Ref: 040/7/20

A. SUMMARY

1. This report, based on research between December 1976 and March 1977, outlines two categories of weakness in the present operation. It was discovered that besides certain faults specific to individual processes, there were also basic failings in the overall system which tended to be exaggerated by process faults. Such failings are discussed in the report as are indications of the means by which they might be overcome in the short and longer term. Meetings between Work Study staff and local managers took place during such researches and this report is representative of ideas and discussions brought forward at such times.

B. INTRODUCTION

1. Objects of the Study

Brandon Central Depot (BCD) has developed from simple beginnings in 1946 to a more complex structure today. It is designed to receive, store, debark and process coniferous roundwood, sort and store resultant products and load transport vehicles with ordered material. Centralisation of these processes has allowed the Commission to process and supply its products more efficiently than direct from the forest.

2. It is equipped with machines, both mobile and fixed, services (including electricity, telephone, water, drainage etc) and skilled industrial and non-industrial staff. However, its evolution has not been systematic and the existing situation is the result of ad hoc decisions and a lack of investment and programme commitment. Developments have taken place in isolation when resources became available and much credit must go to local staff for their creative improvisation. It seemed likely that a system created under these influences would reveal prospects for a more effective operation upon examination. To this end, it was the objective of the study to determine the layout, system and method which was most effective and which yielded the greatest throughput of material per unit expenditure for all specifications of product while maintaining flexibility and paying proper regard to safety, worker welfare and job satisfaction as well as security and environmental factors.

3. Framework of the Study

It was necessary to define the terms within which the study was carried out. Such constraints required to ensure the study was concise were:

(i) The assumption that the Depot was correctly sited, that its existing communications were adequate, and that its overall dimension could, if required, be extended.

(ii) Acceptance that the Depot will continue its present role for at least 25 years and will continue to produce material generally of a similar specification to that produced at present.

(iii) Agreement that the throughput would not decrease but may increase subject to a ceiling of 70,000 m^3/year* and that material available from the forest would be of generally the same specification and proportion as at present.

*Based on input ex-forest.

(iv) Acceptance that there would be no redundancy among existing Depot staff.

(v) Proposals will be put forward in cost/benefit terms but will not presuppose the availability of resources in the future.

4. The Report

This initial report must of necessity cover the whole Depot system and as such may not explore certain work activities in great depth. It is suggested that such topics should form the basis for detailed discussion with appropriate staff and that future reports may be required to investigate some of the aspects individually.

C. BASIC INFORMATION

1. Staffing and Workforce Considerations

43 staff are directly employed by the Commission in the Depot. A list of their duties is given in Appendix 1.A and a breakdown of staff service and age is shown in Appendix 1.B.

2. The workforce is elderly (60% being 50 years or more) and, probably associated with this, there is little staff turnover (nearly 60% having served 10 years or more). Much of the work is not highly skilled but requires experience. However, certain tasks (e.g. sawyers, front end loader operators etc) require skilled operators. Interchangeability is reasonable and flexibility is maintained especially by the younger more adaptable men.

3. Many operations are repetitive and several, including timber stacking, are physically arduous. Some protection against the elements does exist on most operations but the work is still largely dependent on climatic factors.

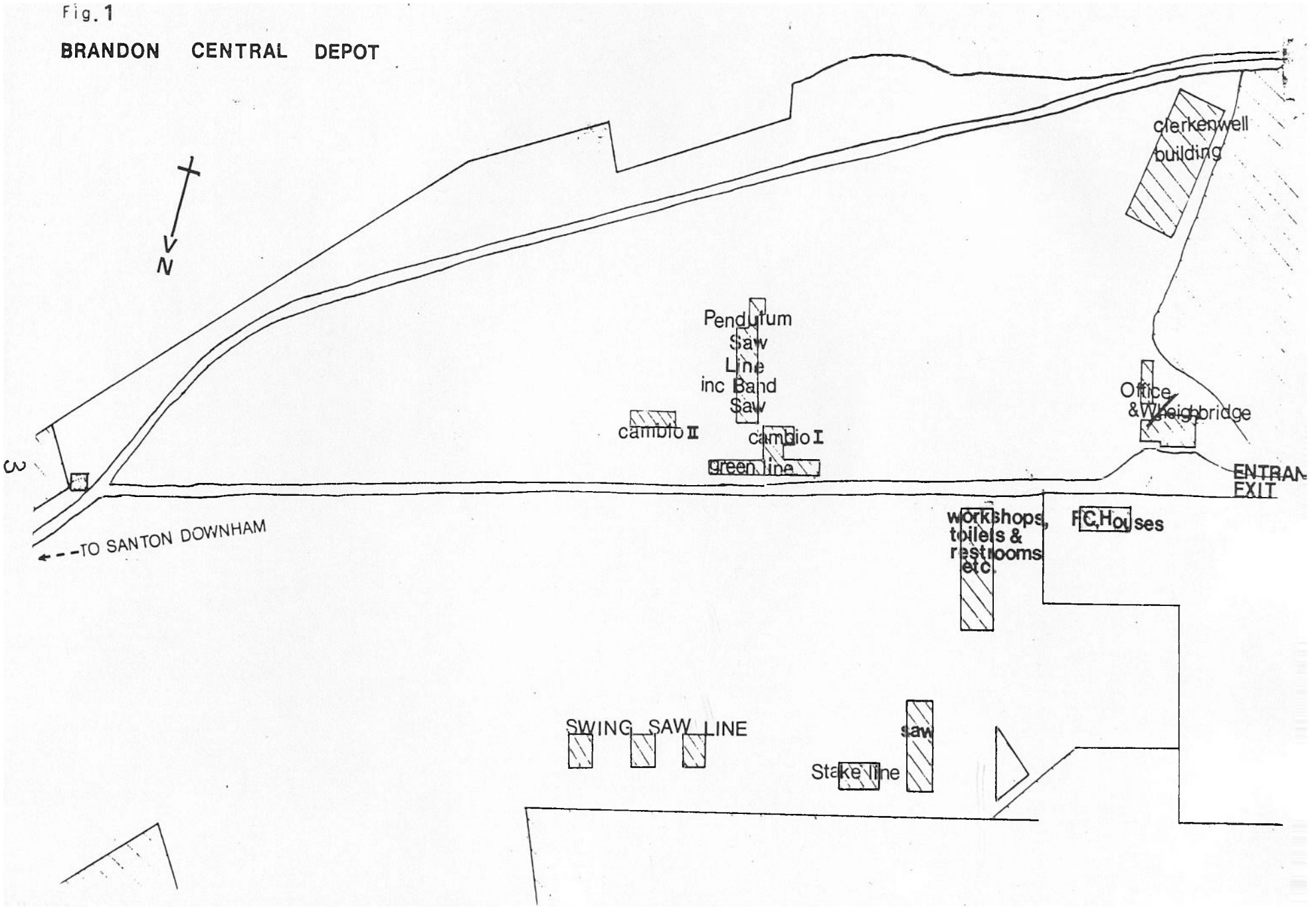
4. Facilities for the work staff are basic and do not provide any degree of comfort for rest periods, wet time, etc, while the buildings themselves are unsightly. Most men bring a private car to work and sufficient parking is required. No provision is made for accidents, illness etc, except for the provision of first aid equipment and two trained staff. The nearest hospital is at Bury St Edmunds. Half of the men take an annual industrial holiday in July/August which facilitates closing down machines for full service etc.

Site and Layout Factors (see Figure 1).

5. The Depot covers approximately 16 hectares of Santon Downham Beat. It is situated adjoining Brandon railway station (Ely-Norwich line) and on the A 1065 Mildenhall-Swaffham road. It has good communications in other directions.

Fig. 1

BRANDON CENTRAL DEPOT



Initiated as a simple storage/conversion area, it has extended to the present dimensions without any special planning.

6. The Depot is on Forestry Commission owned land but is subject to certain legal agreements. The Clerkenwell Association lease the site of the large building abutting the woods near the office although this is not currently used. A right of way exists to it.

7. Two houses opposite the offices are inhabited by Commission staff including the security man. (All valuable plant is normally kept within easy access of his house for supervision). Both require vehicular access. A bungalow behind these houses is owned privately and there is a right of access via the gateway opposite the weighbridge.

8. There is a farm at the far end of the Depot which is let to an Forestry Commission employee who currently has access through the Depot. An alternative access is being considered. Seamans Club also tenant a cottage there with access and have installed two diesel tanks adjoining the workshops although these may be moved if required.

9. Electricity is supplied overground to a transformer at the workshops and underground after that. Water is supplied via a point at the back of the offices to all parties. Telephones are installed in the office, warden's house, chainsaw workshops etc. No statutory rights of way appear to exist.

10. A charcoal burner operates at the far end of the Depot on a site designated by the Depot Manager and he has access.

11. The dumping of unutilised bark at the far end continues and leaves a large area otherwise unoccupied.

12. Tarmacadam has been laid between the offices and the Cambio peeler. Otherwise the site is compacted soil (except for machine standings) which is exceptionally dusty during dry weather and very muddy when it is wet. A metalled road dissects the Depot.

Markets and Stock Control

13. The major market for Depot produced material is the National Coal Board who take about 30,000 m^3/year. However, such a contract represents a composite of orders from 134 individual collieries ordering 82 specifications of roundwood and 46 specifications of splits.

14. In addition, 8-10,000 m^3/year of woodwool is produced in ½ metre and 2 metre specifications.

15. The remainder of the 50,000 m^3/year Depot throughput (based on input ex-forests) is made up of stakes, bungwood, rustics, material for Commission usage as well as the by-products of sawdust, pulverised bark, charcoal wood, firewood and small individual orders for special products.

16. The great diversity of market specifications precludes significant stockpiling and all pitwood is cut to order. Material is stored in the seasoned state after peeling and some 20,000 m^3 is normally held prior to conversion into specific orders. Seasoning is carried out to facilitate easier handling, maximum haulage loads and carried out prior to conversion as market flexibility must be retained. Very little converted material is held on site. The greatest storage space is therefore for seasoning whole pole lengths which is awkward and wasteful of space.

17. Approximately 50% of the bark is pulverised and is available for sale (2,500 m^3) while the rest is dumped at the end of the Depot at a cost of £1/tonne.

18. Stock checks are made at periodic intervals by the Head Forester.

Machines

19. A list of machines used is given in Appendix 1.C.

Maintenance is good generally and breakdowns are dealt with by the resident mechanic. Certain machines require specialised parts(e.g. Volvo front end loaders) but arrangements for obtaining these are good. Older machines (e.g. fork lift) present difficult spares availability. The Depot has no flexibility of working and any breakdown or failure has major impact on the total system. Electrical faults are dealt with either by the Depot Manager of by a contractor as required.

Supervision and Communications

20. The Depot Manager is responsible for the day-to-day running of the Depot. There is no system of communications within the Depot outside telephones in certain buildings. A system may be advantageous with a view fo safety, security and speedier relaying of instructions (e.g. internal telephone system or radio).

Safety and Environmental Factors

21. All machines are required to fulfil current safety legislation and all operators are issued with safety and protective clothing as appropriate.

22. The Depot is dirty, dusty and open to the elements. In dry weather blowing dust and bark is a problem and in wet weather conditions underfoot are extremely poor. Most operations are effectively outdoors and are subject to prevailing weather conditions.

23. Most accidents are associated with timber handling. (Trapped fingers or limbs while loading or stacking material and strains while lifting timber). Many operations, while safe in themselves, require certain work actions which may put the operator at risk. Such points will be outlined in Section F. The work is physically arduous and requires a degree of fitness and strength.

D. STUDY CONSIDERATIONS

Introduction

1. Method study techniques have been employed in the examination of the Depot system. The objective of such work was (i) the improvement of the individual processes that make up the work sequence and (ii) the development of an improved system encompassing not only such processes and their inter-relation but also paying regard to layout and design as well as objectives detailed in Section A. A flow process chart was constructed, breaking the system down into component parts. Such integral parts are classified as operations, inspections, movements, and delays. It should be emphasised that only operations physically change the material and so increase its value. All other activities are ancillary and the object of the system examination is (i) to minimise or eliminate all non-operational activities and (ii) having rationalised the operations, maximise the efficiency of their working.

2. Accordingly, the investigation followed two lines, firstly a critical

/examination

examination of the system followed by individual examination of the various operations. The results of such work will be discussed in Sections E and F.

Difficulties caused by the 1976 Windblow

3. During the period of the study, windblow clearance was taking place at Thetford. This meant a higher mean volume tree was harvested and this showed up in the Depot operation by an absence of the "Cambio" pole material produced during conventional thinning and a marked increase in the unit size of "Small Butt" material. These changes caused problems in maintaining supply of all mining timber specifications and in handling especially where manual techniques were employed. Such a typical conditions should be remebered in considering the implications of this report.

E. SYSTEM FAULTS

1. Certain adverse factors are recognised in most or all activities and these are primarily due to external or inherent influences. These difficulties will be discussed in this section while those specific to certain operations will be discussed in Section F.

(a) Material Specification

2. Timber received from the forests contains a proportion of oversized, bent, forked and poorly sned logs. While this proportion is not normally high the effect on the Depot system is considerable. Non-specification material affects stacking and material handling as well as the peeling and sawing operations and one piece may cause delays of up to 15 or 20 minutes on a process, with subsequent loss of productivity. The specification of timber leaving the forest should be greatly tightened.

3. Material received is of random lengths within overall limits. This is advantageous for utilisation - allowing the great range of market specifications to be cut, but does limit stacking and handling efficiency and makes the transition to automated processes (viz: Log-Deck) problematical. It is recognised that a flexible approach at the Depot may be advantageous to the supplying forests however.

(b) Material Flow and Layout

4. Movement of material is critical, as it is expensive, while adding nothing to the value of the product. Movements between processes should be eliminated or minimised. To do this, it is necessary to alter the layout or utilise machines which are more cost effective. The Depot layout necessitates long travelling distances and this should be much modified to reduce costs. This will be reviewed in Sections I and J.

5. Due to extreme distances travelled, studies indicate that machines cannot maintain the supply of raw materials in some cases, which results in delays in such operations and loss of productivity. (Similarly with the collection of processed material). The layout requires review with regard to material flow. Operational flow paths crossing are (i) potentially dangerous, (ii) lead to delays and loss of productivity and (iii) to unnecessary machine wear. The objective should be unidirectional flow. Unsatisfactory ground conditions (seasonal) are also present and are not conducive to effective transport.

6. Maximum advantage should be made of loaded incoming Forestry Commission lorries and also contractors' lorries in minimising timber handling carried out by Depot vehicles.

(c) Material Presentation

7. Often due to randomised or non-specification material, presentation of timber at peelers, saw benches, etc, is unsatisfactory. Great skill is required by loader drivers to position material adequately, but even accounting for this, load sorting is often necessary preventing a free flow of material and creating delays. The provision of improved infeed arrangements where this is not already present should be considered. Load sorting is arduous and sometimes potentially dangerous.

(d) Servicing and Maintenance

8. In most cases servicing and maintenance are good and a full-time mechanic is employed. However, electrical failures are dealt with initially by the Depot Manager and then possibly by outside contractors. The possibility of a qualified electrician on call should be investigated. Increased or changed processes may require alterations in electricity supply capacity.

(e) Contractors

9. On some work processes, e.g. loading, Commission staff deal with contractors. Liaison should be maintained so that Commission activities and staff are not unduly inconvenienced by the contractors' system of working. As an example, the Coles Crane may have to wait for up to 33% of its time between loading operations on the same firm's trailers. An alternative system could be drawn up.

(f) Safety

10. While all operations are safe within the legal definitions applying to them, some work aspects are arguably unsafe. A recent TUC publication quotes the maximum weight for lifting for men of over 50 (60% of Depot staff) as 35 lbs with a reduction of 25% for regular lifting. While other sources e.g. ILO give a higher limit, there is no doubt that handling manually must be carefully reviewed, especially as most present accidents are associated with it (viz: strained backs and trapped fingers etc).

11. Environmental factors are not satisfactory and protection against the elements, including dust etc, as well as rain, are required.

(g) Seasonal and Weather Factors

12. Certain operations are halted by wet weather despite the fact that part of the process is already protected. Protection in these cases should be completed to prevent unnecessary closedown and loss of productivity.

13. In certain cases better heating, lighting and ventilation could be introduced into the operating area. In most cases, at the moment, heating is ineffective and wasteful. Lighting could extend working days during the winter and increase safety.

(h) Markets

14. The existing market specifications are too many to produce satisfactorily. Short production runs invariably mean low productivity and everything possible should be done to rationalise this situation. The present system precludes stockpiling and makes control very difficult.

15. A market initiative is required to obtain regular pulverised bark sales.

(i) Wastewood System

16. The disposal of wastewood is extremely costly and the whole system for dealing with waste, sawdust and charcoal wood needs reviewing. It may be that this can only be achieved by centralisation of similar machines (e.g. peelers) and a common policy with regard to residue (e.g. bark).

(j) Machine Deployment

17. Besides the major roles of supplying raw materials to operations, front end loaders are required to fulfil certain ancillary functions, e.g. bark and sawdust loading, fork lift work, road cleaning etc. Many such roles cannot be accurately programmed but require the removal of a machine from its main function which exaggerates material flow difficulties. The way in which such ancillary operations could be fulfilled by alternative means or a more flexible deployment of front end loaders could be investigated.

F. OPERATIONAL FAULTS

(a) Cambio Peeling

1. All logs are peeled in the full length (viz: 4-8 m) (prior to seasoning) on the two Cambio machines. The performances of the two machines are indicated below:

Cambio	I	II
Designation (static or mobile)	Static	Mobile
Power	Electric	Tractor powered
Operators	2	1
Maximum diameter material	36 cm	36 cm
Potential output (approx)	50 m^3/hour	50 m^3/hour
Actual output	37 m^3/hour	30 m^3/hour
% efficiency	74%	60%
% utilisation	73%	46%
Output per man	18.5 m^3/hour	30 m^3/hour
Approximate cost of peeling	63p/m^3	63p/m^3
Loading by	Front end loader (or Log-Deck)	Front end loader
Bark disposal by	Trailer or pulverised	Trailer
Other operators involved	Front end loader driver Bark clearance man	Front end loader driver Bark clearance man
System faults (see Section E) paras	a,b,c,d,g,i,j	a,b,c,g,i,j
Operational faults (see next page)	c.d	a,b,c,d 13 years old. Restricted normally to smaller material.

a. Blockages of bark feed. Requires modified bark outfeed system.

b. Ineffective outfeed associated with jams or other delays. Requires modified outfeed system.

c. Change-over in bark-removal trailers causes delays. Requires changed system.

d. Delays while front end loading and infeed blockages. Requires improved infeed system.

Notes:

2. (i) It was not possible to study the log-deck feeding Cambio 1. It is, however, an obstacle to the present system. The present two-man operation of Cambio I is clearly associated with a more advanced system but it currently offers a low output per man. The cab operator could be removed and his function either automated or taken over by the infeed operator. (See Section I reference development of Cambio work however).

(ii) Reject Mechanism

Specification tightening is advocated but a procedure for ejecting "rogue" logs should be considered. Significant delays are caused by processing of unsuitable logs (often becoming jammed) or requiring assistance by front end loaders with either partial or complete infeed unloading.

(iii) Safety

Cambio I operator is enclosed in a cab but infeed operators are at risk especially during loading or from "floods" of material surging forward. Improved infeed devices would increase safety. No bark clearance should take place under operating machinery especially during loading by front end loaders. On Cambio I, if two men continue to operate it, some form of formal communication should be introduced and the infeed operator should have a control to stop the process.

(iv) Priority for improvement - low. Even at existing utilisation and efficiency there appears to be ample capacity for achieving 50,000 m^3/year and upwards towards 70,000 m^3/year.

(v) % efficiency = Total effective Time/Total working time x 100
% utilisation = Total working Time/Total available time x 100

(b) Bark Removal

3. Cambio I bark is either directed to a trailer for dumping or is pulverised and stored in a bunker to the rear of the peeler. Cambio II is blown straight into a trailer for dumping. The exchange of trailers takes several minutes, during which time the peeler does not function. The exchange system could be improved by having a "floating" trailer and a movable outfeed pipe which could be quickly moved over.

4. Pulverising takes place only if the bark is dry which is due to the low efficiency of the pulveriser. Handling bark in two ways is wasteful of resources especially when non-pulverised bark is dumped at a cost of £1/tonne. The possibility of pulverising all bark, including that from Cambio II (which may have to be repositioned), should be reviewed. A sales initiative is required. This would remove the need for tractors and trailers "on call" but could require a pulveriser of suitable capacity and performance.

5. An alternative (and safer) system of collecting bark falling off the logs should be investigated. This operation sometimes necessitates the closing down of Cambio II for a significant period.

(c) Pendulum Saw Line

6. Seasoned material is brought and loaded on the Pendulum Saw Line for conversion into pitwood and woodwool. It is positioned on a small log deck which singles the poles and presents them for sawing. An operator is responsible for activating the log deck/saw feed mechanism. A throughput of 18 m^3/hour is achieved. Problems occur if the logs are malpositioned on the deck and may require the operator to sort, at which point the saw line is unfed. (The operator is required to leave his protected position during this sorting and is at risk from Volvo machines working alongside).

Sawing to a combination of length and top diameter:

Potential throughput	20 m^3/hour
Actual throughput	18 m^3/hour
% efficiency	90%
% utilisation	74%
Loading by	Front end loader and log-deck
Operators	1 Log-Deck Operator 1 Sawyer 1 Woodwool/Wastewood Sorter

System faults
(see Section E paras a, c, f, h, i)

Operational faults

a. Greater reliability of log-deck motor is required.

b. Saw guard clogs with sawdust causing delays. Requires an improved guard and sawdust extraction system.

c. Sorting of ½ metre woodwool from waste is not viable (sorter only produces 1.4 m^3/hour) - an alternative and/or automated system should be introduced.

d. Pieces cut on saw which are not to be split must be removed from outfeed belt, either by an operator (not economical) or by the sawyer with resultant loss of productivity. An alternative system (e.g. combined saw lines) to be reviewed.

Notes:

7. The high efficiency of this operation and relatively high utilisation indicate little scope for increased productivity. It would appear that this operation would be unlikely to achieve more than 27-30,000 m^3/year except by overtime, in which case increased saw capacity would appear necessary to guarantee 50,000 m^3/year, including Swing Saw work and increase capacity towards 70,000 m^3/year.

(d) Splitting (Band) Saw

8. Material for splitting proceeds from the Pendulum Saw and additional material may be added from an auxiliary ramp under the control of the Band Saw operator. The belts conveying material from the Pendulum Saw are often acentric and inadequately profiled allowing pieces (especially larger elements) to fall off periodically. These have to be retrieved,which is arduous and interferes with normal work.

Splitting Saw Details		With auxiliary feed operative	Without auxiliary feed operative
Number of pieces split		4.7	3.2
% time splitting saw splitting		48%	31%
Volume split/hour		16.9 m^3	11.5 m^3
Potential volume split/hour		35.2 m^3	36.5 m^3
% efficiency		48%	31%
% utilisation		72%	72%
System faults (see Section E)	paras	a, b, h	a, b, c, h

Operational faults

a. Logs loaded by auxiliary ramp tend to "flood" and there is no safety barrier. If this system is to be retained a log-deck would be safer and more efficient.

b. Manual attachment is a lengthy process requiring the operator to fix a lug on a moving chain. (Poor safety aspects). Such attachment largely accounts for delays in splitting saw operation.

c. Due to a variable flow of material, the operator is faced with surges of work which is inefficient. He may have to stop the belt until the work "peak" is resolved. The whole balance of work for this machine warrants investigation.

d. Failures on subsequent stacking operations also cause delays.

Notes

9. This operation is not efficient. Much capacity is unutilised. To overcome this low efficiency a new system is required to ensure a faster, smoother flow of material for splitting. The objective should be a continuous "nose-to-tail" throughput, which will probably require automatic attachment. The output could be as high as 35,000 m^3/year, probably quite sufficient for foreseeable splitting requirements and it may be that the extra saw capacity required (see F(c)) could also be passed through this saw.

(e) Stacking after Splitting

10. Splits are stacked after sorting in pallets. The roller bench is adequate but the outfeed to it required modification. Material has to be turned over 180° by the operators for progressing; this could be automated.

11. Fuller weather protection is required for the three operators. Pallets are currently inadequate and the fork lift service should be improved. System faults (see Section E paras b,f,g,h and j).

(f) Swing Saws

12. Small round mining timber and some other specifications are cut on the swing saws. These comprise two saw units operated by two men each feeding a common conveyor to a three-man operated stacking area.

Potential output	16 m^3/hour each saw (probably 10 m^3/hr. for Cambio poles)
Actual output	11.5 m^3/hour (" 7 m^3/hr. " ")
% efficiency	72%
% utilisation	64%
Operators for two saws	7
Output per operator	3.3 m^3/hour
Loaded by	Front end loader
Powered by	Electric
System faults (see Section E paras a, b, c, d, f, g, h, i and j)	

Operational faults

a. Material on infeed ramps can block conveyor. Modify infeed ramps.

b. Delays during loading by front end loaders of infeed (a safety precaution). Modify infeed - a log-deck.

c. Construction of belt structure is flimsy necessitating maintenance by operatives and causing delays. Stronger material required.

d. Saws badly positioned ergonomically requiring timber to be pulled through further than necessary. Redesign or incorporate rollers.

e. Belt is not symmetrical causing wear and instability of material. Rectify.

Operational faults (cont)	f. Start/stop buttons on belt should be more accessible for safety reasons.
	g. Waste disposal method could be improved. Possibly down the line to a container.
	h. Cambio pole length inhibits full utilisation of stacking area. Rectify.
	i. Specifications cause unbalanced flow (System fault E(h)) and erratic work load for stackers.
	j. Pallets are old and worn requiring rebuilding, loss of material with subsequent delays to stackers, fork lift operator etc.
	k. There should be a proper sawdust collection system instead of manual handling.
	l. Grid for measuring could be made available to sawyers especially bearing in mind the number of specification changes made.
	m. 2 metre material should not be handled manually and the lorry used to transport it for splitting effectively blocks access to the fork lift driver for minutes on end.
	n. Any breakdown/delay halts the whole work system.

Notes:

13. This operation is in many ways successful despite major inefficiencies and design/structure failures. It is primarily intended for small timber (Cambio poles) probably not exceeding a unit volume of 0.06 m^3 each but has been used (reference to windblow working) for larger material. The relative proportion of larger material in the future, means only a limited demand for this type of system and it is likely that an improved swing saw line could cope adequately with the smaller material demands. Further saw capacity would have to be of the Pendulum Saw type as physical presentation of material averaging 0.15 m^3 to the saw is not acceptable.

(g) Splitting Saw

14. The machine is situated behind the swing saw line and splits small props from it.

Potential output	9.3 m^3/hour
Actual output	2.6 m^3/hour
% efficiency	26%
Operators	2
System faults (see Section E paras a, b, c, f, g, h, i and j)	

Operational faults

a. The feed ramp is too wide and small pieces fall through.

b. Delays occur during ramp loading for safety reasons.

c. Alternative feeding is direct from pallets, requiring lifting of material.

d. The location of the saw is extremely inconvenient causing delays in supply and removal of products.

e. Saw overheats and is prone to material "fly-back". Sharpening is often required.

f. Sawdust removal is extremely inefficient.

g. Pallet failures.

h. Electrical failures.

An extremely inefficient operation which should be completely redesigned and resited.

(h) Front End Loaders

15. 3 Volvo front end loaders are used to progress material around the work sequence prior to conversion. They also undertake certain ancillary roles.

16. The normal cycle is made up of terminal times (loading and unloading) and movement times which are related to the distance travelled.

The time for a cycle (c) can be expressed as follows:

$$C = (\Sigma ti + t2 \ldots + 0.00385 (\Sigma xi + x2 \ldots)) \ 1.18 \text{ minutes}$$

where ti etc are terminal times and xi etc are the component distances in metres. 0.00385 minutes is the time taken to cover 1 metre over the normal work range and the 18% addition covers other work.

17. It can therefore be established that for a given operation (e.g. loading and unloading a Cambio) a cycle time will exist dependant on the variable distance and the constant terminal elements.

18. By this means, knowing the throughput of the processing operation and the mean load of the Volvo, a load per hour requirement can be established, and therefore each load will have a critical time value. Using this figure in the above equation it is therefore possible to establish (using observed terminal times) the maximum cyclic distance which it is possible to travel and still maintain a viable supply.

19. Cycle distances evaluated by this means are (based on present actual outputs):

To supply	
Cambio I	500 m
Cambio II	680 m
Pendulum Saw	1830 m
Swing Saw	1290 m
Pendulum and Swing Saw	680 m

20. These figures hold good only for the Volvo machines. The Bray loader was capable of moving a greater unit volume of timber/unit time and accordingly could still maintain supplies with a greater working cycle distance.

21. It should be noted that the above figures are the total of all component distances travelled and not a working radius or diameter.

22. The Volvo operation is limited by the large distances travelled and unprogrammed breaks to carry out other work, ancillary operations, or to assist operators with jams etc. The occasional breakdown of a Volvo causes difficulties in maintaining supplies to operations and a forest-based Volvo is sometimes brought in.

% utilisation	76-87%
Operators	3
System faults (Section E)	a, b, c, j.

No major operating faults within the limitations of the machines.

(i) Fork Lift Truck and Pallets

23. The present machine which moves converted material is 20 years old, unreliable and difficult to maintain because of lack of spares. The capacity is 10 tonnes while 3 tonnes is the normal Depot working limit. However, the centre of gravity of some larger material is well forward requiring extra capacity.

24. The fork lift truck services both the Pendulum and Swing saw lines (and the stake line when operational). It spends a great deal of its time unproductively moving from one line to another.

25. A fork lift truck is designed for maximum lifting and minimum travelling. In the Depot the reverse applies, 81% of the time is travelling, normally over 100 metres per journey and often in excess of 300 metres in addition to movements between lines. It is not designed for rough terrain or for speed and the high repair time on what should be a reliable machine is due to a great extent to its use in the wrong context.

26. This vehicle should be replaced by a rough terrain, faster machine with less lifting capacity. The present machine has no attachments and offers no flexibility to the system. Ancillary operations performed by the Volvos at present (with disturbance to production flow) could be handled by a more flexible fork lift, e.g. sawdust loading, bark moving and possibly even loading of logs on saw lines etc in emergencies (with a clamp fork).

% utilisation	79%
Current output	30 m^3/hour handled
System faults	b, d, h, j

Operational faults a. Pallets are in very poor condition (and should be replaced). The result of this is (i) failure of forks to engage, requiring manual assistance (ii) pallets collapse losing load (iii) instability of load (requiring the fork lift to travel slower than necessary especially if the

/alternative system

Operational faults (cont)

alternative system with the Volvos is used) and (iv) delays associated with protracted assembly of pallets by stackers.

b. Delays at saw lines because fork lift is servicing other operations. Pallets are moved when the machine is available and not necessarily when they are full, so that sub-optimal loads are carried.

c. Because of b., checking is often required before pallets can be moved which holds up fork lift operation. Possibly this could be done in the stacking area.

d. Traffic congestion around saw lines inhibits better fork lift service.

27. The need for better movement of converted material indicates that more formal service to the saw lines is offered. This could be achieved by:

(i) Having a fork lift for each saw line, responsible for servicing only that line. Utilisation would drop but ineffective (and possibly damaging) travelling would be minimised and efficiency on the saw lines increased. If the machine were flexible it could also handle other work aspects.

(ii) Bringing the saw lines together with a common product area where one fork lift could operate more effectively.

(iii) Investigate alternative methods of timber handling. Lift is not important, while movement is (e.g. the possibility of bundling props etc).

(j) Pallets

28. The pallets used in the Depot are old and worn and problems associated with them are due to their age and state of repair rather than to their design. While carrying upward of 130 different products, the introduction of a more rigid standardised pallet cannot be considered. The requirements of the pallet for Depot use are that they should be (i) robust (ii) cheap (iii) easily replaced or repaired (iv) adjustable for different lengths of timber and (v) of a size and weight to be handleable when empty.

29. The present design is considered quite acceptable - certain minor modifications might be considered - but new pallet making material is urgently required. The impact in lost productivity (and occasionally safety) of worn pallets is significant and widespread.

30. Banding of props was considered but shelved as (i) the expense seemed excessive (ii) the number of specifications made it difficult and (iii) lack of uniformity of handling at N.C.B. pits presented major difficulties.

(k) Coles Crane

31. The mobile crane is 11 years old but shows good reliability. Outputs vary from 20-33 m^3/hour depending on prop size and utilisation is 85%.

32. The system requires the crane driver to operate the crane and arrange loading and a mate to sling the load and dismantle pallets.

33. The operation is effective and major delays are the result of the existing system for contractors' lorries. Five or six trailers are available with one tug unit and these are loaded in turn. A delay of 20 minutes or more takes place between each load which accounts for considerable lost time per day. An alternative system could be considered with the contractor.

34. The trailers are badly equipped for carrying timber and are normally short of bolsters etc which often increases the delays between loads. The mate is under-utilised and could spend more time assisting on preparation and loading. Preslung pallets could be advantageous.

(l) Tractors and Lorries

(i) Platform Lorry with Hiab Grapple

35. This machine moves 2 metre woodwool and large pitwood. The capacity is normally greatly in excess of the volume/weight carried. The possibility of an independent loader and trailers should be investigated. The lorry causes much congestion around saw line outfeeds.

(ii) Tractors

36. These machines fulfil certain ancillary purposes e.g. sawdust and bark removal, ½ metre woodwool movement etc. These operations may be challenged (see individual sections) but, under the present system, these tractors while of low cost effectiveness do maintain maximum flexibility of working at a low unit cost.

(m) Stake Production

37. An improved system could be developed but this is low priority based on present usage. Double handling, machine inefficiency etc are noted.

G. MACHINE AND PROCESS ANALYSIS

Introduction

1. Other than machine modifications indicated in Section F, improved productivity may be achieved by improving other parts of the system (e.g. material handling, machine balance, marketing specifications etc) and these will be discussed in this section. However, it was necessary at the outset to challenge the present work sequence of peeling, seasoning and conversion. It appears that such a sequence is required under the present market and manpower constraints. To convert directly after peeling would be advantageous but cannot be recommended because (i) manual handling is made difficult and (ii) marketing arrangements preclude stockpiling, and conversion is to order with immediate dispatch required. (Stacking of seasoning material in the pallet would lead to economy of stacking space and may speed up the seasoning process). Major market changes would require a complete re-evaluation of the work sequence. E.g. a reduction in specifications might allow direct conversion after peeling.

Material handling

2. To achieve greatest benefits material handling in the Depot must:

(i) Maximise loads (e.g. not carry partially filled pallets or use lorries to move a small number of props).

(ii) Minimise distances travelled by instituting a formal and designed layout (associated with the processing machines involved).

(iii) Have a traffic flow to overcome delays with possibly road priorities to benefit main traffic streams.

(iv) Utilise lorries bringing material into the Depot. (Correct positioning of such loads can save much front end loader time later).

(v) Review layout to avoid congestion around processes.

Material Specifications

3. These must be:

(i) Tightened to avoid delays in Depot Processes.

(ii) Reviewed to see if random lengths or a more structured length class is acceptable. If selected lengths are required there is no reason why forests should not continue to supply random lengths and sorting be carried out as part of the peeling process. This requires ~~only~~ an extended deck and differential "kick-offs".

4. Random lengths offer potentially greater utilisation across all sizes and ease of operation in the forest but mean greater stacking area per unit volume, sub-optimal Volvo loads, difficulties to infeed log-decks etc.

Machine Balance

5. Peeling capacity appears quite sufficient although it may be that the Cambio II will be replaced by a static machine in due course. The throughput of Cambios I and II is approximately 67 m^3/hour while the sawing capacity of both Pendulum and Swing saws is about 40 m^3/hour. This imbalance is not critical due to the larger "buffer" of seasoning stock but to achieve a balanced system and produce up to 70,000 m^3/year extra saw capacity will be required. Because of the overall size of material being handled (and the swing to larger sizes) such saw capacity should be in the form of an extra Pendulum saw or equivalent. The Band saw utilisation indicated that (with automatic feeding) it could accept the outflow of two Pendulum saws and Volvo loading could still be maintained by the present number of machines (especially if ancillary duties were removed to a modified fork lift unit) provided a compact layout was maintained.

Market Specifications

6. The present situation (cutting over 140 different market specifications all told) is inefficient in terms of processing, handling, stacking etc. This figure should be greatly reduced and negotiations have been opened with the main customer (N.C.B.) in this context.

7. Small cash sales could be collected together at an area ajoining the office/weighbridge. Informal access by persons requiring rustics, stakes etc should be eliminated on safety grounds.

H. PROPOSALS - SHORT TERM

1. For the immediate future, it is recommended that the following aspects

/will repay

will repay attention:

(a) Operational and machine faults as listed in Section F should be rectified.

(b) Market specifications should be significantly reduced as far as possible.

(c) The layout with regard to material stacking should be rationalised and associated with the various processes. (This will be discussed in greater length in Section I).

(d) Material specifications should be tightened.

(e) Improved arrangements for electrical servicing are required.

(f) Within the budget available, all operations should be made weatherproof.

(g) Material presentation should be investigated and where possible log-decks etc installed to provide a more efficient flow of material to the various processes.

(h) The Green Belt (Log-Deck) should be made effective or removed as it constitutes an obstacle to free working.

(i) Improved palletisation should be available (including the facility for pre-slinging).

(j) Trials of alternative front end loaders should continue - to ascertain the most effective in cost per unit volume of timberper unit distance moved terms.

(k) Alternative fork lift facilities should be reviewed.

(l) Cash sales should be based on an area adjoining the office. (Free access of private motorists is considered unsafe and a possible breach of HASAWA). Such an area to be determined. Stakes, rustics, bark etc would be available.

(m) Improved arrangements with Contracts reference lorry/trailer preparation and availability should be considered.

(n) Traffic flow should be investigated and an unidirectional system introduced with priorities etc and arrangements to overcome congestions.

(o) The provision of an independent loader and trailers instead of the lorry could be considered.

(p) Delays on the weighbridge due to absence of operator should be removed.

(q) All lifting operations involving manual working should be critically examined with a view to removal.

(r) An internal communications system might offer speedier instructions, improved safety arrangements and less lost time on breakdowns etc.

(s) Improved ground conditions should be achieved by tarmacing, especially adjoining work areas.

2. Paragraphs a-d, f, i, k and q are considered highest priority.

3. By these means, productivity can be increased by up to 10% based on critical machine flow but will have also many non-tangible advantages. Most of these recommendations do not require major expenditure and would yield an early return in increased productivity.

4. Only marginally beneficial uses are considered for the Clerkenwell Building - it is poorly placed for most functions. However, it could be used as workshops etc.

I. PROPOSALS - LONG TERM

1. The present system processes 50,000 m^3/year requiring a certain amount of overtime. To obtain a throughput of 70,000 m^3/year some additional capacity and extra ancillary back-up will be required. It is not possible to enlarge any of the existing processes in their present form and a new layout and format is required. It is recognised that the capital investment required is linked initially to a potential gain of around 20,000 m^3/year but it is suggested that any future development should incorporate maximum flexibility for further future enlargement should such be required. This, taken with the non-tangible benefits associated with an improved workplace, may warrant an appropriate level of capital investment.

2. The Depot has been under-capitalised related to its throughput estimated at around £1.5 million and most static machines and buildings should only have a low capital value. Their replacement over a period of 10 years or less is likely and this offers the possibility for appropriate system changes and redesign.

3. Longer term changes will encompass the processes and the layout.

Processes

(i) Cambio Peelers

4. Major advantages are seen in bringing together the Cambio (or other peeler units) to form a single structure. The early replacement of Cambio II offers the possibility of its replacement by a static machine. All replacement Cambios should have capacity in excess of 36 cm diameter to give greatest flexibility of working and paying regard to the increasing unit volume of incoming timber.

5. Advantages of an unified system can be summarised as:

(a) Provision of full building to achieve all weather working and maximum operator protection and comfort.

(b) Single unit for communications and supply of services etc.

(c) All bark to common pulveriser with reduction in inefficient alternative bark removal systems. An improved pulveriser to handle greater throughput in all weather conditions is required. The pulverised bark could be stored in a silo from which automatic loading could be achieved. A realistic and regular market for pulverised bark is required.

(d) The operation could be automated or semi-automated with control at a distance and accordingly safer operator conditions.

(e) Greatest flexibility of working in the event of breakdowns, planned maintenance etc.

(f) Loading by front end loader or leg-deck could be performed according to infeed flow this minimising delays. (Similar on removal of peeled material).

(g) Possibility of a common outfeed filling more quickly and minimising delays by Volvo loaders awaiting hoppers filling.

(h) Alternatively, a common but segregated outfeed could be developed utilising different "push-offs" on Cambio decks. Random lengths could continue to be brought into the Depot (giving the forests maximum flexibility) but could be sorted prior to seasoning giving increased stacking efficiency and improved utilisation.

(ii) Saw Lines

6. An extra Pendulum Saw (or other) is required if up to 70,000 m^3/year is to be achieved. Parallel saw lines with a common feed to the Band Saw which would be automatically fed are suggested to provide a more balanced system. Roundwood cut on the Pendulum Line will be sorted onto the Swing Saw Line running parallel for stacking, and conversely any Swing Saw Line material for splitting could either be switched onto the Pendulum Saw Outfeed or progressed to a secondary splitting facility.

Figure 2 shows a possible arrangement.

7. Advantages foreseen are:

(i) Greater machine balance and increased efficiency yielding outputs at the desired level but with scope for additional capacity if so required.

(ii) No requirement for lorries, tractors, trailers etc moving material between lines. Some reduction in staff on ancillary operations but offset by increased number of men required on main production lines associated with increased throughput.

(iii) Similarly, fork lift ineffective time travelling between lines removed and maximum utilisation of its capacity made.

(iv) Greatest possible flexibility of working and response to market demands.

(v) Whole operation should be under a single roof with improved working conditions, greater job satisfaction, safer operations on specially designed machines etc and elimination of all wet weather lost time.

(vi) Common sawdust collection to silo. Improved health conditions and reduction of ineffective other work time.

(vii) Common collection of all waste wood could be incorporated (see I).

(viii) Infeed arrangements simplified allowing for maximum loading efficiency (loading according to infeed priority).

(ix) Improved communications possible and building served by common service supply.

(x) Manual movement of timber reduced and possibly eliminated if automatic stacking/sorting could be introduced.

(xi) Possibility of rest rooms etc being incorporated into single structure increasing convenience to staff and reducing lost time travelling to and fro at breaks (see I).

(xii) Design features could minimise energy output on movement of timber e.g. use of gravity in links between saw lines.

(xiii) Lower priority operations e.g. stake production, picnic furniture etc, might be incorporated into the same building (with waste disposal in common etc).

(iii) Waste Wood

8. The possibility of converting all waste wood into chips could be investigated. Such a process would unify the several waste disposal systems currently operating and reduce the quantity of ancillary equipment/staff necessary. If appropriate, forest residues might also be brought in for chipping if financially viable and in order to sustain a reasonable machine throughput.

(iv) Facilities for Industrials

9. The present facilities are inadequate and represent something of an eyesore. These should be replaced and unified to provide a full and adequate range of services. This could form an adjunct to one of the major units previously referred to. Workshop capacity is limited and adequate on site provisions should be made for routine repairs with a proper equipped workshop.

Layout

10. In I (i) and (ii) the case for individual Cambio and saw units is made. The existing cramped structure with Cambios I and II and the Pendulum Saw Line in close proximity preclude major enlargement of any of these units to the capacity required. The present machines are not designed for enlargement and congestion is already a problem at the existing throughput. Study of Section F (h) also indicates the impossibility of providing adequate storage space within the required radius defined by machine requirements.

11. It is essential that accepting the existing work sequence (see G para 1) there should be a layout of the types indicated in Figure 3.

12. All possible structures require the re-siting of one or both major functions (viz: peeling and sawing) but it is considered that the capital involvement is not inhibitory to this. Scheme 1 requires the enlargement of the Cambio I unit but the re-siting of all saw lines, while Scheme 2 is the reverse of this. Scheme 3 requires complete restructure of both major functions and the enlarging laterally of the Depot to facilitate a true cyclic arrangement.

13. All schemes require a new road structure.

14. From the stock control point of view Schemes 2 and 3 are preferable while Scheme 1 is considered environmentally superior with the main operations at a distance to housing etc.

15. It is not possible to make a formal recommendation or layout until certain comparative costings have been produced and certain major policy decisions made. To that end it is suggested that the future layout of the Depot be made the subject of a specific project within the defined constraints and data as yet to be determined.

J. INDICATIONS FOR FUTURE WORK

1. The objects of this research were largely diagnostic and the results should stimulate further enquiry and discussion. The short term changes and any modifications to the system, methods etc require individual assessment so that they should fulfil their objectives completely.

2. It is essential that the ad hoc decisions responsible for the evolution of the Depot give way to a planned and orderly development towards defined objectives. A development sequence should be drawn up and all new works, machine replacement, layout changes should be in sympathy with such an order. Work Study projects could be undertaken on specific activities to ensure that such developments do most fully meet the requirements so defined.

3. Layout is a major factor and it would be the intention of the Work Study Team to finalise a layout once certain critical decisions mentioned in Section I have been made based on detailed costing etc.

K. ACKNOWLEDGEMENTS

The E(E) Work Study Team express their gratitude to Conservator E(E) and his staff for their co-operation and assistance received in carrying out this investigation. Particular thanks are due to Graham Hobbs and Martin Sayer, the Depot Managers and the Depot workforce for their helpful suggestions and enthusiasm.

E(E) Work Study Team

R O Smith
K E Wallis
A MacLure
L A Cohen

May 1977

Fig. 2 POSSIBLE ARRANGEMENT FOR SAWLINES

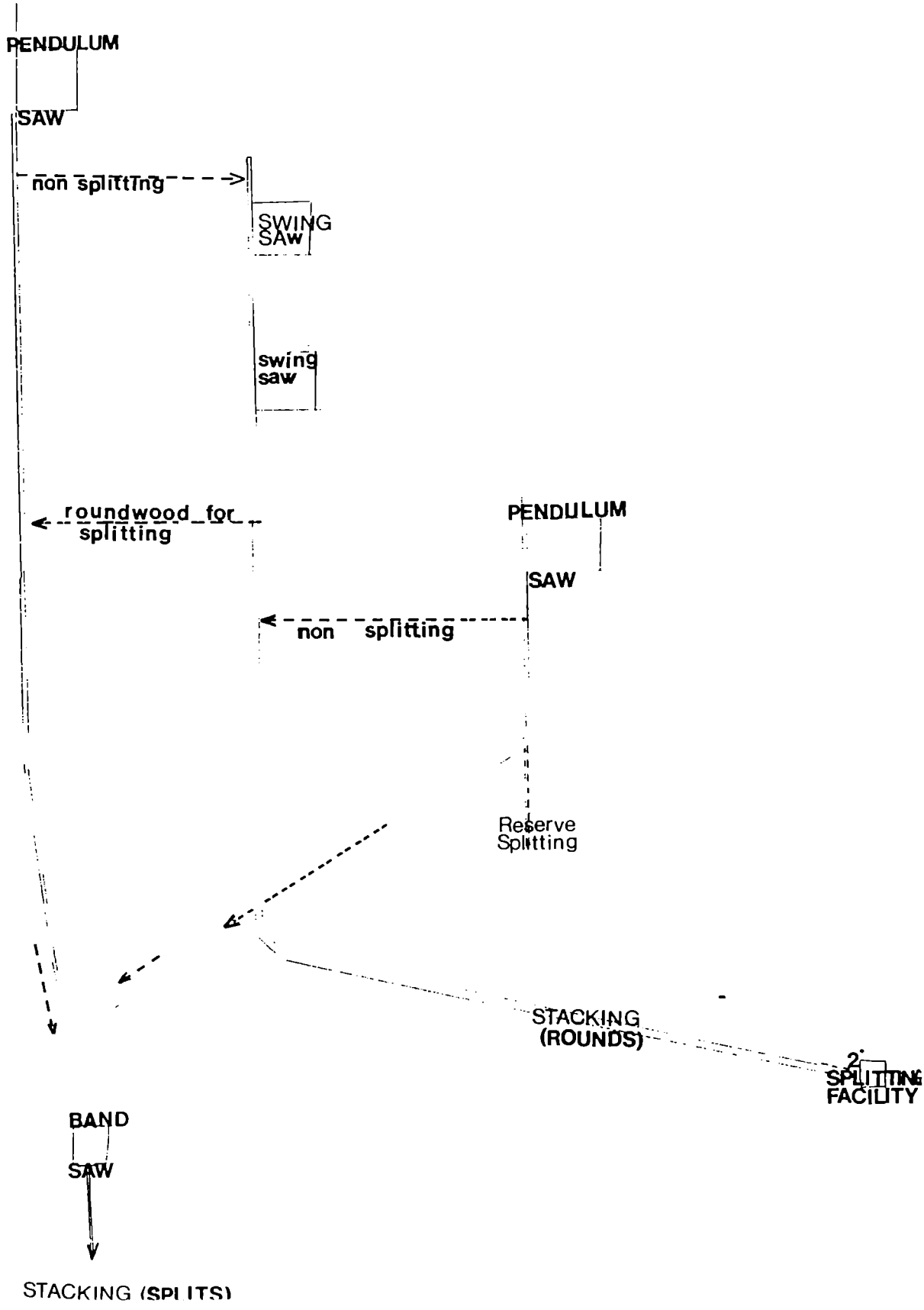
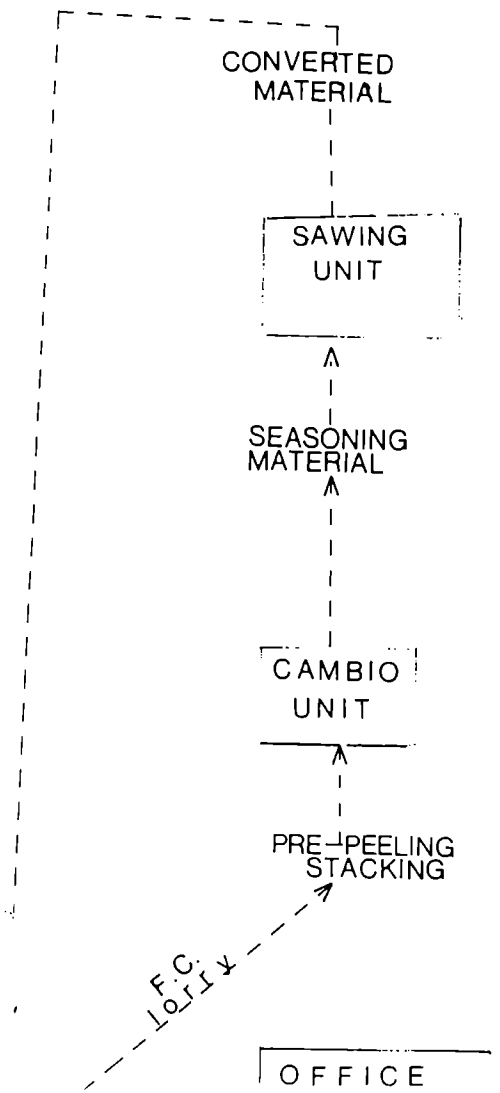


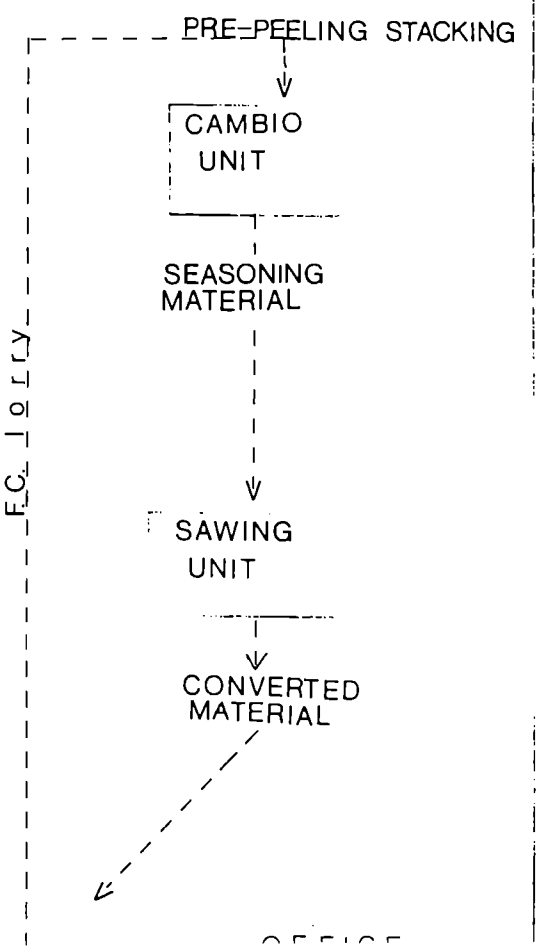
Fig. 3

POSSIBLE DEPOT LAYOUT

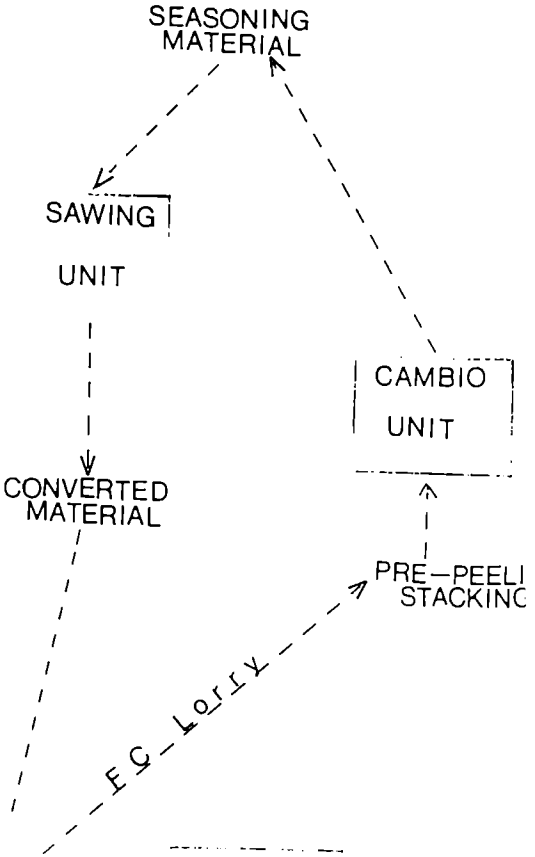
Scheme 1



Scheme 2



Scheme 3



PRESENT DEPOT STAFF

1 Head Forester (Depot Manager)

1 Forester (Assistant Depot Manager)

3 Gangers

3 Clerks

1 Crane Driver

1 Crane Mate

1 Lorry Driver

3 Front End Loader Operators

1 Fork Lift Driver

1 Water Tank Driver

3 Tractor Drivers

6 Pendulum Saw Gang and Band Saw

7 Swing Saw Gang

1 ½ metre Woodwool Man

3 Cambio Peeler Operators

3 Stake Gang

2 Splitting Saw

2 Odd Job Men

---

43 Total

MAN POWER AGE CLASS STRUCTURE

AND LENGTH OF SERVICE

Age Range (years)	% Workforce in each age class
20-29	5%
30-39	12½%
40-49	22½%
50-59	40%
Over 60	20%

Service Range (years)	% Workforce in each service range	
	Brandon Service	Total FC Service
0-9	42½%	25%
10-19	45%	15%
20-29	10%	40%
30-39	2½%	17½%
Over 40		2½%

MACHINE UTILISATION

Machine		In Use	Driver Maintenance	Repair	No Work Available
Volvo 61129	Hours	1185.0	76.5	32	226
T Adams	%	78	5	2	15
Volvo 57884	Hours	1138.0	70.5	208	79
Hub Reeve	%	76	5	14	5
Volvo 69080	Hours	1293.0	79.0	30	92
Dave Collinson	%	87	5	2	6
Fork Lift 66541	Hours	1130	84.5	91.5	129
	%	79	6	6	9
Coles Crane 54657	Hours	1231	101	-	124
	%	85	7		8
Fordson Tractor (Mill) 53622	Hours	226	42	-	1133
	%	16	3		81
Fordson Tractor (Cambio) 54653	Hours	649	66	108	594
	%	46	5	8	41
Ferguson 135 Tractor	Hours	578	49		773
(Peeler Stakes) 52313	%	41	4		55
Fordson Tractor 71207	Hours	652	73		675
	%	47	5		48
Fordson Tractor 71209	Hours	388	73		939
	%	28	5		67
Fordson Tractor 71208	Hours	431	69		900
	%	31	5		64
Ferguson 165 Tractor 57885	Hours	226	42		1132
	%	16	3		81
Forresian Saw 54644	Hours				1400
	%				100
Pendulum Saw	Hours	1048.5	107	103	175
	%	74	7	7	12
Band Saw 60825	Hours	1020	112	-	282
	%	72	8		20
Band Saw 60822	Hours				1400
	%				100
Swing Saw 71043	Hours	673	54		313
	%	65	5		30

Machine		In Use	Driver Maintenance	Repair	No Work Availabl
Swing Saw 71044	Hours	652	57		331
	%	63	5		32
Liner Saw 53173	Hours	202	24		1174
	%	14	2		84
Liner Saw 53175	Hours	204	30		1166
	%	15	2		83
Liner Saw 54645	Hours	169	25		1206
	%	12	2		86
Liner Saw 54035	Hours	193	20		1187
	%	14	1		85
Liner Saw 52001	Hours				1400
	%				100
Liner Saw 54034	Hours				1400
	%				100
Liner Saw (Stake Line) 53628	Hours	379	30		991
	%	27	2		71
Cambio 64295	Hours	1034.5	91	56	241
	%	73	6	4	17
Bark Mulcher 65169	Hours	877.5	78	40	425
	%	62	5	3	30
Lorry 56469	Hours	1125	58		257
	%	78	4		18
Water Lorry 55364	Hours	726	76	152	498
	%	50	5	10	35
Chainsaw 69676	Hours	364	41		995
	%	26	3		71
Chainsaw 69685	Hours	451	47		902
	%	32	3		65
Chainsaw 66848	Hours	54	9		1337
	%	4	1		95
Chainsaw 69684	Hours	172	18		1210
	%	12	1		87
Cundey Peeler 55410	Hours				1400
	%				100
Cole Peeler 56529	Hours	138	12	80	1170
	%	10	1	6	83

APPENDIX 11b

WORK STUDY BRANCH

EAST ENGLAND WORK STUDY TEAM REPORT NO 50 TO CONSERVATOR E(E)

BRANDON CENTRAL DEPOT

PHASE TWO REPORT

Ref: 040/77/21

Contents

Distribution: Conservator E(E) - 12
Mr A R Sutton, H&M Division - 2
Chief Work Study Officer
Work Study Team Leaders
Work Study Library

EAST ENGLAND WORK STUDY TEAM REPORT NO 50 TO CONSERVATOR E(E)

BRANDON CENTRAL DEPOT

PHASE TWO REPORT

Ref: 040/77/21

A. SUMMARY

1. As a result of the previous Phase I Depot Project in 1976/77, a Working Party was set up to examine the findings of the Phase I Report and to recommend a new structure which would overcome the existing problems and fulfil the various objectives set down.

2. This report contains the findings of the Working Party and a recommendation with regard to an ideal structure is made. Detailed preliminary specifications are given with estimated costs and some indication of the potential savings in a new structure are also shown.

3. The recommendation for a complete restructuring is made in terms of the financial advantages but legal, safety, staffing and other non-tangible factors are also stressed. The present Depot cannot be extended without major modification so that increased throughput demands a revised structure. Much ground is at present inefficiently utilised due to poor material flow and layout.

4. The Phase I Depot Report should be read as a necessary prerequisite to this Report.

B. INTRODUCTION

5. This Phase II Project on Brandon Central Depot was commissioned by Conservator E(E) after detailed discussion of the Phase I Report produced by the East England Work Study Team in May 1977.

6. The initial project (East England Work Study Team Report No 47) had been diagnostic and had indicated certain operational and system faults which reduced productivity or otherwise conflicted with other named objectives including safety, job satisfaction, security etc. Certain short-term remedial measures were instituted immediately following the Report, but it was the object of the Phase II Project to determine an optimum Depot design which minimised or eliminated factors which had been discovered in the Phase I Project as being detrimental to efficiency.

7. In addition, certain other objectives were listed as being essential in any new structure. These were:-

(a) Maximum cost efficiency.

(b) High worker satisfaction and safety.

(c) Maximum environmental protection.

(d) Optimum customer benefits.

(e) Greatest flexibility of operation to cater for possible market changes.

In addition, the constraint of sustained output during a transitional period was also imposed.

8. Quite clearly the design and structure of a modified Depot would involve many aspects of the Commission's activity and so that any proposals for such a redevelopment should be balanced, a multidisciplinary Working Party was set up. This report represents the proposals and recommendations of the Working Party and the suggested design is a concensus of all interests based on the evidence and data currently available.

9. The members of the Working Party were:-

M Dinning	Assistant Conservator H&M, E(E)
J Kellie	District Officer i/c Thetford
K Buswell	District Officer H&M, Thetford
G Cook	Conservancy Mechanical Engineer E(E)
G Hobbs	Head Forester i/c Brandon Central Depot
E Portlock	Area Land Agent
R Smith	Work Study Officer, East England Work Study Team

C. RÉSUMÉ AND DISCUSSION OF PHASE I REPORT

10. The Phase I Report identified both operational faults specific to the processing equipment in use and system faults which are largely associated with the existing layout and balance of machines.

11. The Long-Term Proposals (Section I) listed the requirements considered necessary to overcome such faults with the advantages pertaining thereto. In essence these involve:-

(a) The creation of a new unified twin-unit peeler and associated bark pulveriser in a purpose built structure detached and remote from the sawlines (Section I paras 4 and 5).

(b) The development of a purpose built sawline system in one building comprising both splitwood and roundwood production with cross-over facility between lines for maximum flexibility of operation (Section I paras 6 - 8).

(c) Improved office, workshop and industrial facilities.

(d) Improved road structure associated with the new layout and better communications.

12. The Working Party discussed the advantages of such developments and endorsed the overall recommendation for a new format to follow these lines. The basic layout as reviewed in Section I paras 10 - 15 was also considered and the recommendation was for Scheme 2 (see Figure 3).

13. The reasons for the choice of this Scheme were:-

(a) The layout makes available the best area in the Depot for seasoning.

(b) Handling costs are minimised as incoming FC lorry takes the produce to the far end of the Depot and subsequent Front End Loader movement is reduced by 50% or more.

(c) Loading time is minimised with lorry park, converted produce, office and weighbridge adjacent to each other.

(d) Minimum transitional disturbance and developments can be carried out largely independent of existing pressures.

(e) System offers greatest flexibility for subsequent modification should that be required.

(f) Security is improved with converted material adjacent to offices and houses (also machine shed location).

(g) Improved stock control.

14. This report is based on this layout with the provisions for new equipment as indicated earlier. However, the costs associated with these would generally hold good against any similar development.

15. Figures 1 and 2 illustrate the situation before and after the proposed redevelopment and Figures 3 and 4 show the flow of material through the converting processes in the existing and proposed structure.

Design Factors

16. The Working Party recommended the retention of the existing Swing Saws in the short and medium term. They would provide useful crosscutting capacity in the transitional period, and offer extra facility for converting other types of material (e.g. pulp) should that be so wished.

Their continued use in this context would also provide a "buffer" against too rapid a reduction in work availability and hence stabilise workforce numbers in any transition.

17. It was also recommended, after much discussion, that the single entrance/exit be retained. The existing weighbridge, although inadequate in some ways, does allow material to be weighed into the yard (FC normal requirements) and out of the yard (haulage contractors requirements). Separate entrance/exits would probably require the installation of a second weighbridge which is considered unnecessarily expensive. The existing single entrance/exit provides good security as it is located by the Commission houses and office and there are doubts about the possibility of providing a further major entrance onto a very busy road with difficult safety aspects.

18. The weighbridge is accordingly seen as a key point in the design and the roading arrangements must be orientated to serve it efficiently from both directions. A traffic island is recommended to provide controlled turning of lorries with defined directional priorities.

19. A Formal Communications system probably based on an internal telephone system is required for improved communications, safety, etc. It is considered that approximately six units should be sufficient to cover the area adequately.

D. CRITICAL ANALYSIS OF DEVELOPMENT

Introduction

20. Before proceeding to list the detailed specifications and costing of the

/Working Party's

Figure 1

SCHEMATIC PLAN OF PRESENT LAYOUT

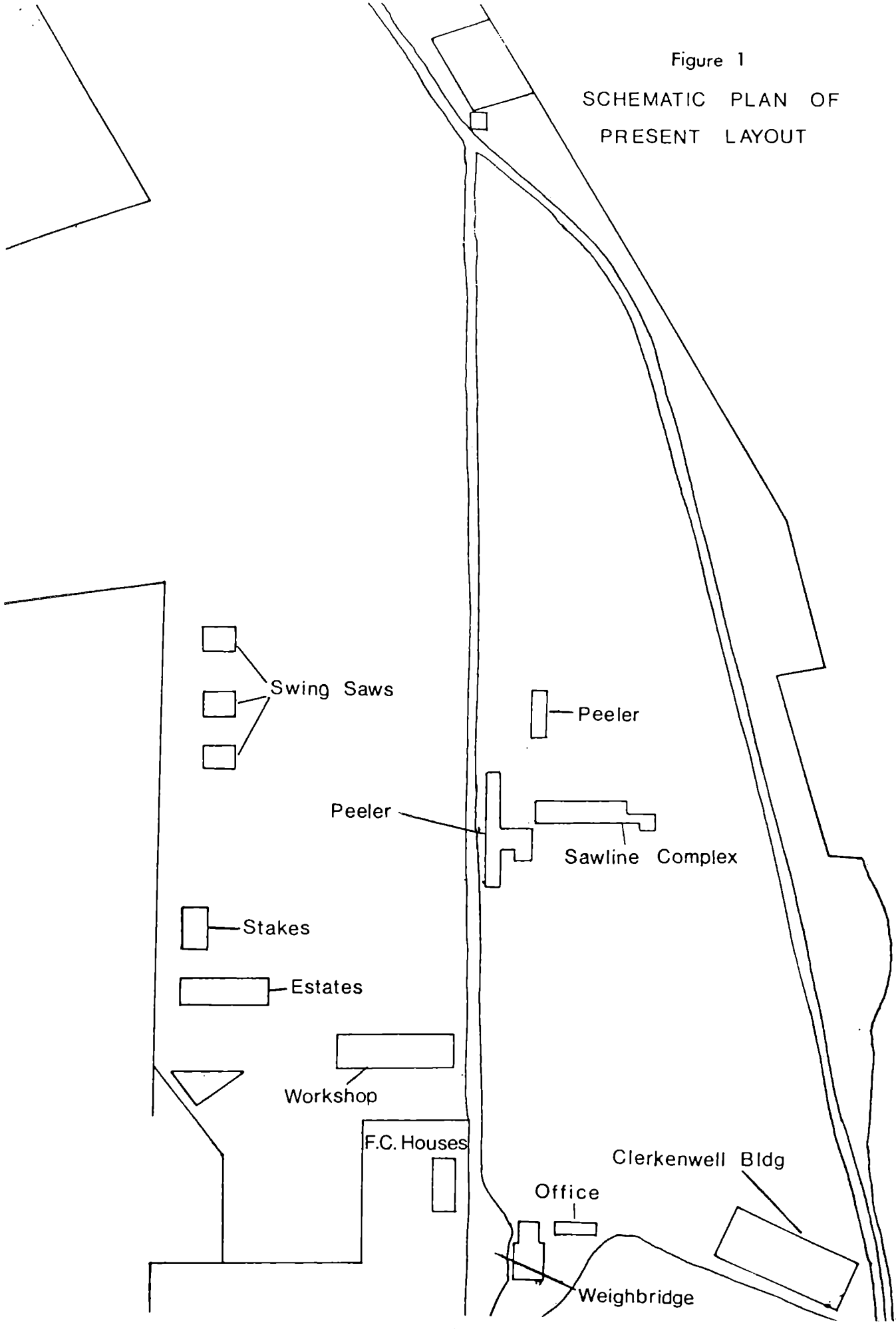


Figure 2

SCHEMATIC PLAN OF RECOMMENDED LAYOUT

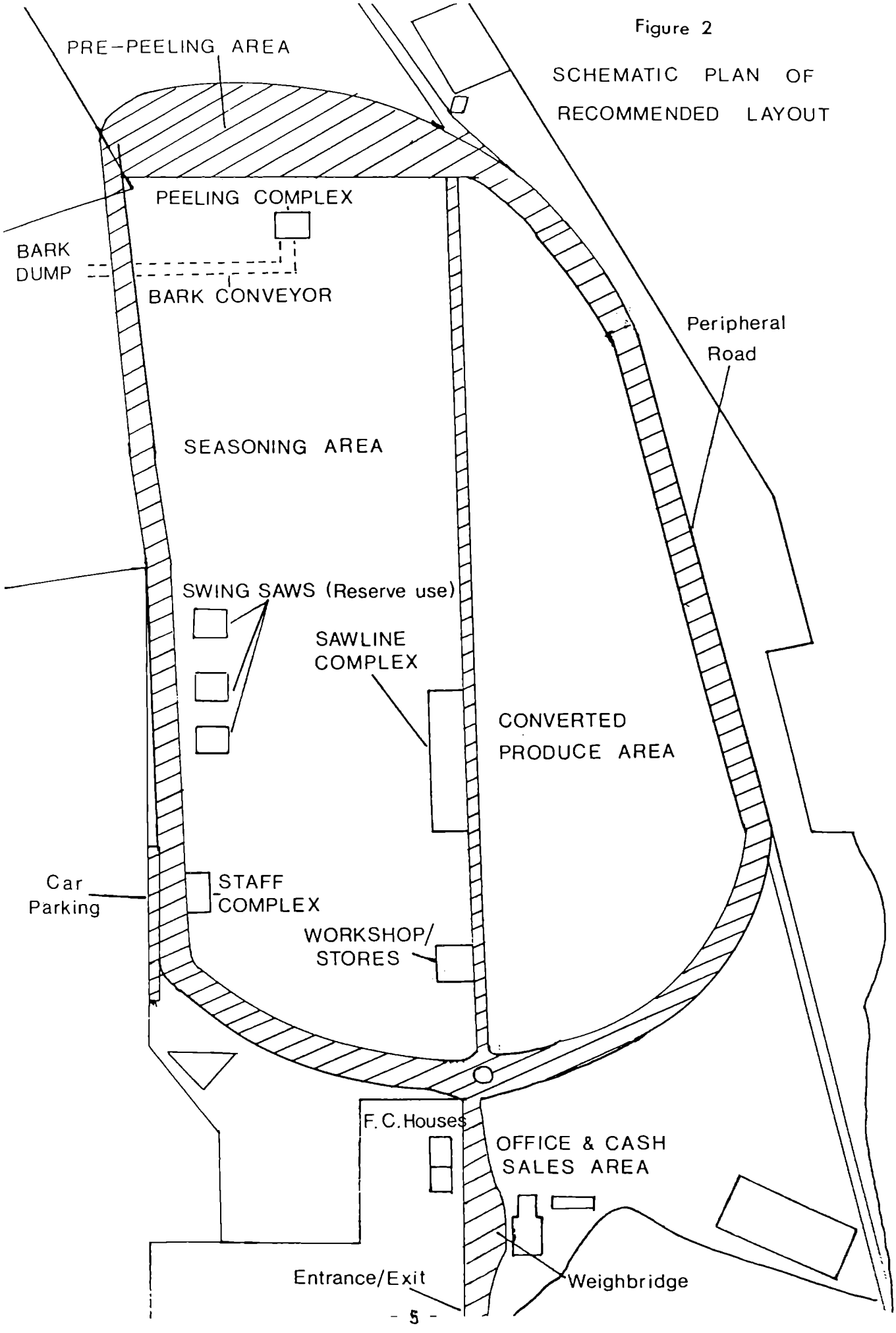


Figure 3

SCHEMATIC PLAN OF PRESENT LAYOUT

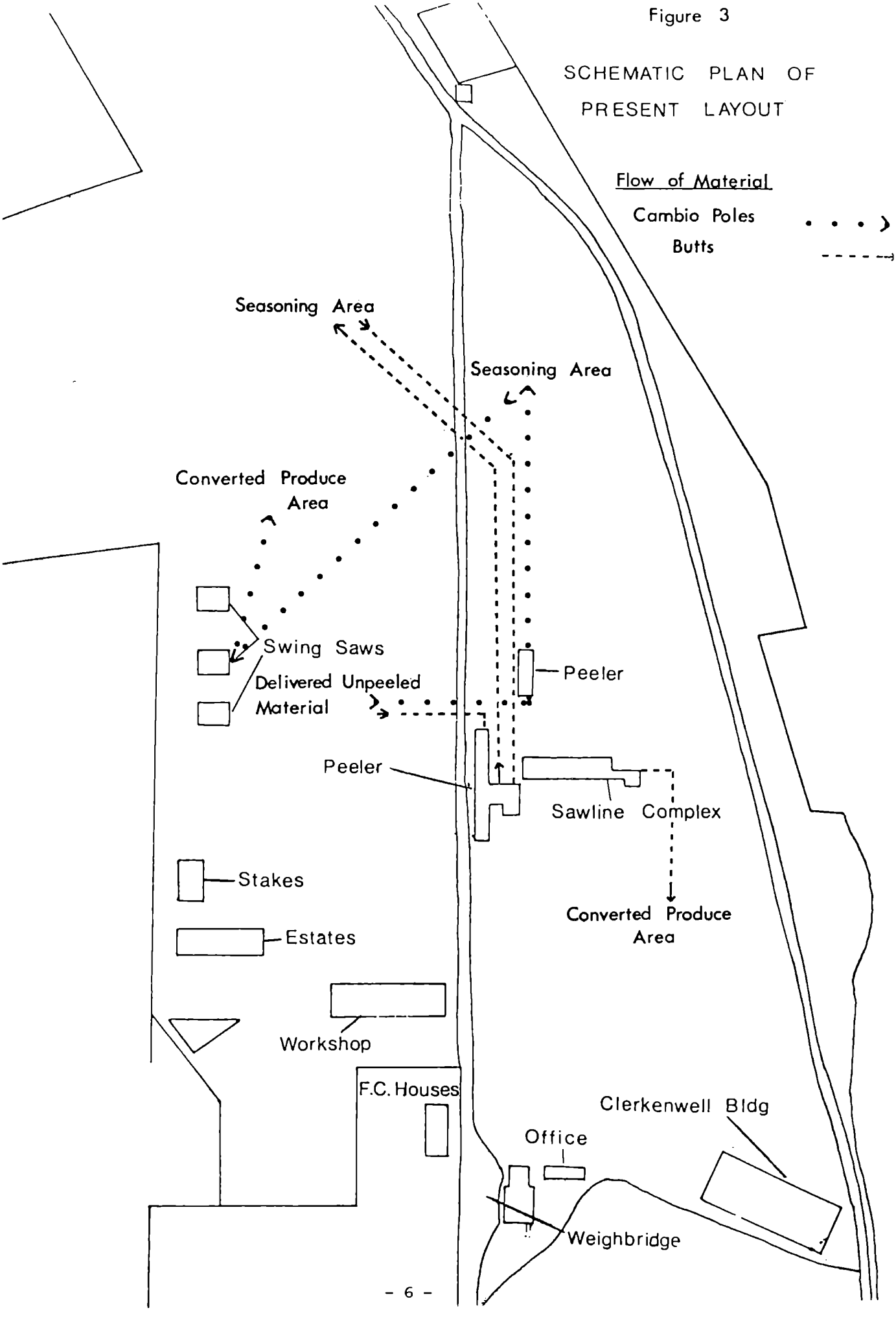
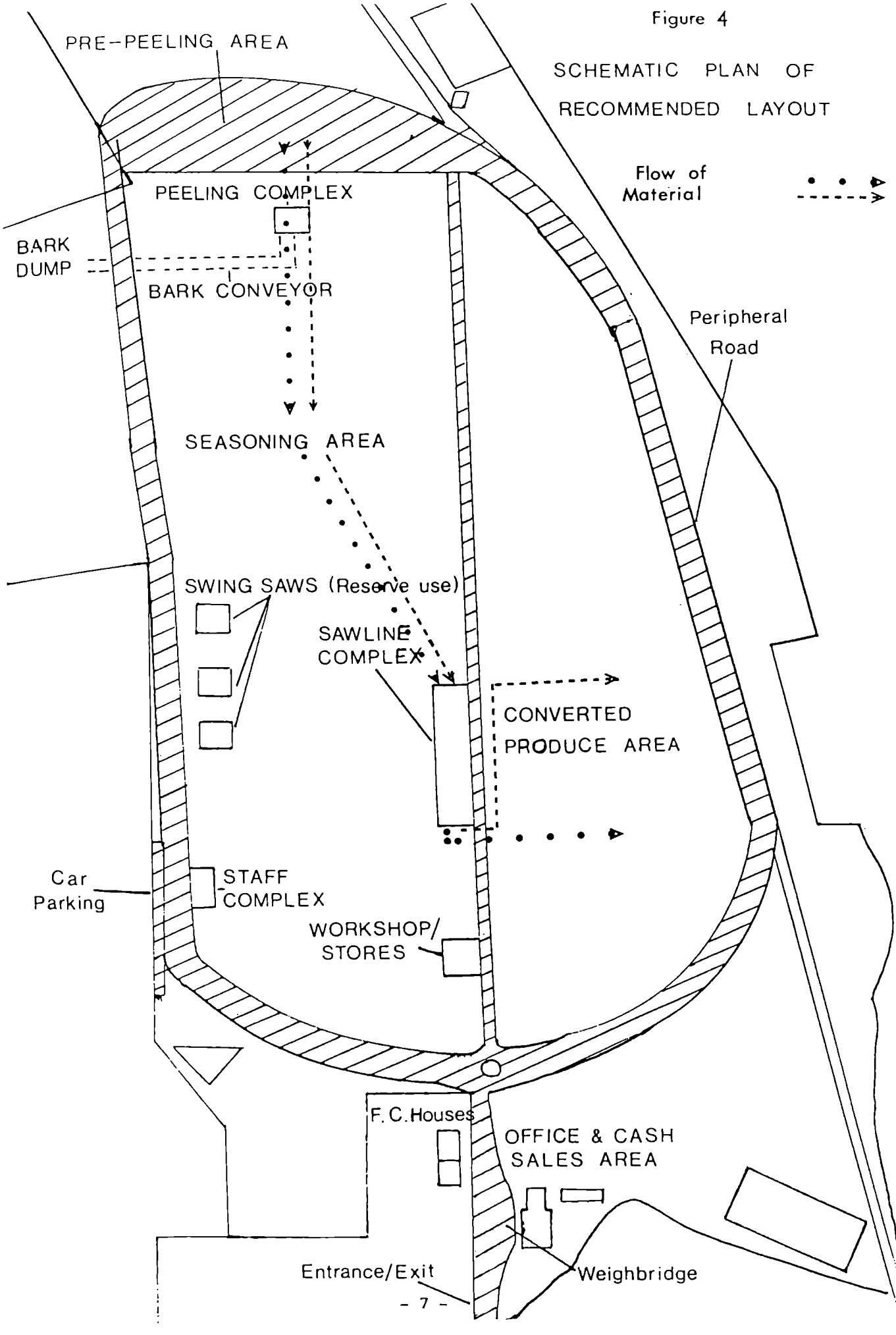


Figure 4

SCHEMATIC PLAN OF RECOMMENDED LAYOUT



Working Party's proposals, it is considered necessary to assemble a concise justification for the redevelopment. While such a restructuring is considered absolutely essential, a major investment will be required. By its very nature, however, such a redevelopment could only proceed as an entity and not partially. For example, there is no point in providing extra peeling capacity if the subsequent sawlines are unable to cope. This means that the scheme is submitted for acceptance or rejection only.

21. The benefits of the proposed new Depot format break down into those that can be evaluated in tangible terms by increased productivity and those that are perhaps just as essential but are impossible to quantify. These will be reviewed separately.

Non-Tangible Advantages

(a) Recruitment and Staff Relations.

22. It is considered unlikely that long term recruitment of suitable labour will be available unless improved conditions both during work and rest time are provided. Currently, the work/rest conditions are somwhat basic and the work is carried out by long serving staff (up to 25 years or more) to whom these conditions have become a way of life.

Young recruits may find such conditions intolerable in relation to those available in outside industries and a staffing problem may come about when present staff retire (largely over the next 10 years).

23. Working in these conditions on old machinery with its associated problems the men expect and deserve improvements. Morale is as good as can be expected but there is little doubt that provision of new work and rest facilities would probably be associated with much improved worker satisfaction and better productivity. Such improvements are those which good employers are normally striving for to keep abreast of modern work conditions.

(b) Safety.

24. The existing system because of its erratic and unplanned development over several decades is not geared towards the new approach required by current legislation. While modifications to machines and systems are ongoing, there is little doubt that to make such equipment truly safe in terms of the HASAWA is problematical. In many cases to fit sufficient guarding etc may mean virtual rebuilding of the machine in question or a fundamental change in its system of work.

25. The Working Party considered that one of the major advantages of a complete redesign was the possibility of bringing in purpose built machines with all the current safety devices available and therefore installing a system which accords entirely with current legal requirements.

26. Communications in the event of an accident would be greatly improved and improved first aid facilities would be available in the new system. Manual handling of timber, associated with many accidents, would be reduced. Redesign would also open the possibility for incorporating much improved sound suppression built in to the installations.

27. The large number of pit prop specifications supplied (about 130) probably preclude extensive autostacking but the Working Party recommend that even if

/full autostacking

full autostacking could not be achieved then at least partial autostacking should be provided to deal with the heavier material. It was noted that nearly all accidents in the Depot are associated with timber handling at some stage. Provision has therefore been allowed in the detailed specification for at least partial autostacking.

(c) Visual.

28. By any standards certain parts of the Depot are an eyesore; a point raised on Commissioner's visits to the Depot. Old Nissen huts and similar buildings constitute the Workshop, Stores and Mess Room. Scrap equipment and improvised shelters over machines are also unsightly. Environmentally, there is little to be proud of, even on an industrial site, and bearing in mind that the Depot is seen by many dozen official visitors a year, its current appearance is hardly favourable even though its effectiveness is good. A new structure could make this a prestige item for the Commission.

(d) Stock Control and Security.

29. Under the new design converted material would be unified in one area adjoining the office and security man. This would improve stock control and security. The new buildings (especially Workshop complex) would also provide greater security of equipment. The purpose built peeler and sawline buildings could also incorporate security features.

(e) Flexibility of Operations.

30. It is considered that the structure suggested would provide for the greatest flexibility of operation within a working system. The possibility of using appropriate parts of the system at one time, commensurate with the production requirements, would mean greatest economy and ease of organisation.

The capacity of the system is geared up towards 70,000 m^3 ensuring that sustained production would be possible based on current markets and timber supply for the foreseeable future.

(f) Wear and Tear on Machines.

31. The present system works at or around maximum output at all times and it is considered that a system working well within itself would suffer less damage and breakdowns, and that a proper traffic-flow system would facilitate easier Front End Loader operation reducing the stop/starts occurring at the moment at intersections.

(g) Replacement of Machines.

32. All current major machines would need replacement in the next few years. The peelers are 6 and 13 years old and the Pendulum and Band Saw 7 and 6 years. Some of the ancillary equipment is even older, e.g. the Fork Lift which is over 20 years old and the Coles Crane (which continues to do a good job) 15 years.

33. The difficulty of reinstalling much of this equipment into a new system is certain and, in any case, it may make little sense as it may need replacing in a short time (see also (b) Safety).

Needless to say, such a major redevelopment will "set up" the Depot for many years without the need for major reinvestment in equipment in that time.

Tangible Advantages

Introduction

34. The Depot running costs are approximately £½ million/annum but receipts exceed £1½ million. The difference reflects the price "paid" to the forest beats for their produce. On a 50,000 m^3 volume programme this balance of £1 million reflects a payment to the beats supplying of about £20/m^3. This figure acts as an index of the Depot's productivity and can be compared to the outside market price for similar quality material to ascertain whether or not the operation is economically viable. On current prices this figure is adequate but as has been established there is ample scope by redevelopment for (a) increasing income by increasing throughput and (b) reducing processing costs by eliminating ineffective time/operations.

(a) Increased Throughput.

35. The redesigned system will be capable of handling 70,000 m^3 - an increase of 40%. On present markets and assuming this extra throughput is taken up by the market, sales could increase to £2 million plus.

(b) Reduced Processing Costs.

36. The unified peeler complex and sawline complex offer the opportunity for reduced processing costs and substantial savings in ancillary/support operations which are extremely costly in the present system.

An immediate expected saving of £12,200/annum could be made by the removal of unproductive wet weather time (currently budgeted at £3,200) by bringing all processes under cover and thus making them weatherproof and eliminating overtime payments (£9,000/annum) by providing a system of sufficient capacity. It may well be that extra productivity could be expected due to improved working conditions (e.g. proper heating, lighting etc) and cleaner produce entering the processes.

37. Quite clearly major economies are also predicted in actual processing costs. At this stage such savings are extremely difficult to quantify especially as new equipment and its related systems have still to be agreed. However, using expected throughputs based on knowledge of existing machinery, and potential equipment under discussion, it is possible to predict performance and accordingly calculate processing costs.

38. In order to cost such operations several decisions have had to be made. All operations, existing and future, have been allowed 20% downtime above expected actual usage. This figure may penalise new equipment and accordingly savings calculated are conservative.

39. Labour has been costed at £2.50/hour to reflect a piecework rate wage and oncosts. Machines have been costed both existing and expected at the 1977/78 PDC rate which is based on Current Cost Accounting and so should reflect replacement values. Without knowledge of precise machine costs and running expenditure it was considered that this was the only realistic yardstick that existed.

Costings

40. Peelers

Current: 50,000 m^3 processed @ 33 m^3/hour + 20% downtime = 1818 hours

Machine cost: 1818 x £7.75 = £14,100

Man cost (2 machines): $\frac{1818}{2}$ x 4 x £2.50 = £9,100 (based on 4 man gang)

Total = £23,200 or 46.4p/m^3

Predicted: 70,000 m^3 processed @ 48 m^3/hour + 20% downtime = 1750 hours

Machine cost: 1750 x £7.75 = £13,600

Man cost (2 machines): $\frac{1750}{2}$ x 3 x £2.50 = £6,600 (based on 3 man gang)

Total = £20,200 or 28.8p/m^3

Processing saving = 17.6p/m^3 or £8,800 on a 50,000 m^3 programme/annum

Additional: 1 further operator and tractor and trailer will not be required for bark clearance saving approximately £4,000/annum. Some additional time may be required on bark feed to dump etc but overall a saving on the existing programme of at least £12,000/annum (based on a 50,000 m^3/annum programme) could be expected which does not include time currently spent on dealing with the current bark heap or other irregular ancillary jobs.

41. Crosscutting

Current: 50,000 m^3 crosscut (gross pre-barking)

35,000 m^3 via pendulum saw @ 18 m^3/hour + 20% downtime = 2333 hours

Machine cost: 2333 x £2.92 = £6,800

Man cost (1 machine) 2333 x 6 x £2.50 = £35,000 (6 man gang including band saw operator and stackers)

Total = £41,800

15,000 m^3 via swing saws @ 12 m^3/hour + 20% downtime = 1500 hours

Machine cost: 1500 x £0.98 = £1,470

Man cost (2 machines) $\frac{1500}{2}$ x 7 x £2.50 = £13,100 (7 man gang)

Total = £14,500

Overall total = £56,300 or £1.13/m^3

Predicted: 70,000 m^3 crosscut (gross pre-barking)

50,000 m^3 via pendulum saws @ 20 m^3/hour + 20% downtime = 3000 hours

Machine cost: 3000 x £2.92 = £8,760

Man cost (2 machines) $\frac{3000}{2}$ x 11 x £2.50 = £41,250 (based on average 11 man team)

Total = £50,000

20,000 m^3 via swing saws @ 16 m^3/hour + 20% downtime = 1500 hours

Machine costs: 1500 x £0.98 = £1,470

Man cost (2 machines) $\frac{1500}{2}$ x 6 x £2.50 = £11,300 (based on 6 man gang)

Total = £12,800

Overall total = £62,800 or £0.90/m^3

Processing savings £0.23/m^3 or £11,500 on a 50,000 m^3 programme.

In addition, the lorry used for transferring material from the swing saw line to pendulum saw line would not be required, saving £5,000 (including driver) per annum.

42. Volvo (Front End Loaders)

It is estimated that under the new system, because of improved layout and system, the three Front End Loaders could still manage to handle the increased throughput of 70,000 m^3. The hourly charge for Front End Loaders is £2.59 and they operate for an average 1200 hours/annum each.

Total current cost of Front End Loaders 1200 x 3 x £2.59 = £9,300 or 18.6p/m^3 for a 50,000 m^3 programme, accordingly for a 70,000 m^3 programme assuming similar hours and charge, the per cubic metre charge would be 13.2p/m^3, a saving of 5.4p/m^3 or £2,700 on a 50,000 m^3 programme.

43. Fork Lift Truck

Costed at £2.59/hour by improved layout will be able to handle the increased throughput with handling charge reduced from 6.2p/m^3 to 4.4p/m^3, a saving of 1.8p/m^3 or £1,000 on a 50,000 m^3 programme.

There are many other areas where savings could be expected, improved loading arrangements, handling and rehandling waste, stock control, reduced minor equipment etc. On this evidence savings are predicted as follows:-

Removal of wet time	£3,200/annum
Removal of overtime working	9,000/annum
Savings on peeling operation/bark removal	12,000/annum
Savings on crosscutting etc	15,500/annum

Volvo and Fork Lift operation	3,700/annum
Miscellaneous savings (reduced minor equipment etc)	4,600/annum

= £49,000/annum based on a 50,000 m³ programme.

On the annual budget of £340,000 m³ this represents savings of 14.4% plus non-tangible benefits listed earlier. It should of course be stressed that programmes in excess of 50,000 m³ could not be achieved without extra capacity being incorporated.

*This figure excludes cash payment of £160,000 for haulage, and is therefore based on actual processing costs.

44. Autostacking may save up to 5 or 6 man years depending on the degree to which it is possible to install full, partial or restricted autostacking facilities. It is expected that further savings of up to £25 or £30 thousand could be expected but prediction is difficult until a specific system and design is agreed. It is stressed once again that automatic stacking of the heavier material is considered essential in view of the safety implications.

45. It is also suggested that extra revenue may ultimately be found by chipping all waste and residue material. At this moment the markets are weak but the signs are that in the longer term this will be a realistic outlet. This item is not included in the detailed specification at this stage. The possibility of bringing in forest residue for chipping was noted.

E. DETAILED SPECIFICATIONS AND COSTINGS

Introduction

46. The main objective of this phase of the project is the recommendation of an optimal structure for the Depot taking due account of certain constraints. The Working Party's proposals have been reviewed earlier and in this section detailed specifications and costings relating to such proposals will be given.

47. While all such information has been provided by specialist staff and is based on all known data and factors at the time of writing, it should be pointed out that it is intended only as a realistic guide to the investment required and its allocation. Detailed specifications could only be prepared after further lengthy research, probably involving several external agencies, with an associated degree of financial involvement. It is recommended that no approach is made to construction firms, planning offices, machinery suppliers etc until Commission staff have discussed and authorised the "broad-brush" budget contained in this report. It is considered that such details and costings as are given provide a realistic framework in which more specific information can be added in due course, as available.

48. For simplicity the scheme is broken down into sub-units for specification and costing purposes and each will be treated individually.

The scheme breaks down into the following units:-

Unit A Proposed new Peeling Complex.
Unit B Proposed new Sawline Complex.
Unit C Proposed Industrial Staff Room Complex.
Unit D Proposed Workshop Complex.

Unit E Proposed Peripheral Road and associated unloading areas.
Unit F Proposed Office and Cash Sales Complex.

49. While most descriptions and costings are specific and based on current market information, others, particularly buildings, will depend on the type of machinery finally selected and obtained. However, it is considered that these costings would hold good for any situation of the various units. In effect, the costs reflect that for a new system, without reference at this stage to precise locations.

Unit A - Peeling Complex

50. It is proposed to construct a single peeler unit comprising twin peelers of selected make/type supplying a central bark pulverising unit. Processed bark to be removed by conveyor to dumps remote from the unit. Each peeler to be controlled by a single operator with both operators having safety cut-outs for both machines. Further cut-outs available along the length of the feed decks. The peelers to be raised to assist gravity operated outfeed subject to automatic kick-off. A third man is required to supervise the bark pulveriser and conveyor and to ensure that debris, rubbish etc is cleared from infeed decks. He would also be able to stop both peelers in case of emergency, and generally oversee the smooth running of the operation.

Specification:

		£
(a)	2 New Peelers of selected make with maximum diameter capacity in excess of 40 cm and minimum diameter about 6 cm	80,000
(b)	Provision of automatic "kick-off" devices and full provision of control panels to facilitate one man working, including compressor	22,500
(c)	2 infeed ramps consisting of ramp plus 1 active log deck stage	10,000
(d)	2 outfeed collecting bins of correct profile	8,000
(e)	1 centralised pulveriser unit of appropriate capacity with primary outfeed to conveyor and infeed from both peelers	25,000
(f)	120 metres (approx) Conveyor System with adjustable outfeed to convey pulverised bark/non-pulverised bark over peripheral road ex peeler to dump	12,000
(g)	Bark Bays (3 bins associated with different grades of bark)	2,000
(h)	Tarmac area associated with Bark Bays to facilitate loading	2,000
(i)	Short belts to collect bark under peeler infeed decks including funnel plates to collection points	5,000

		£
(j)	Peeler Complex Building, final design subject to machine type, but assessed as Cantilever building, length 15 metres and width 9 metres incorporating 3 metres overhang at each side with 5 metres clearance (ground to cantilever) to provide all weather working and full safety provisions = 135 m² @ £40 = £5,400	5,400
(k)	Tarmacadam surround (say 600 sq metres) and drain link up	2,000
(l)	Installation charges for above, including site preparation	5,000
(m)	Fittings and incidentals plus contingency allowance	5,000
(n)	Charge for bringing power approximately 250 metres (ex old site) underground	8,000
(o)	Dismantling old peelers	600
		192,500
Less		
(a)	Sale of Old Cambio Units and accessories	4,000
(b)	Sale of Old Pulveriser Unit and accessories	1,500
(c)	Sale of Old building and miscellaneous	500
		6,000
	Net total	£186,500

Unit A Total Cost = £186,500 (£186.5 thousand)

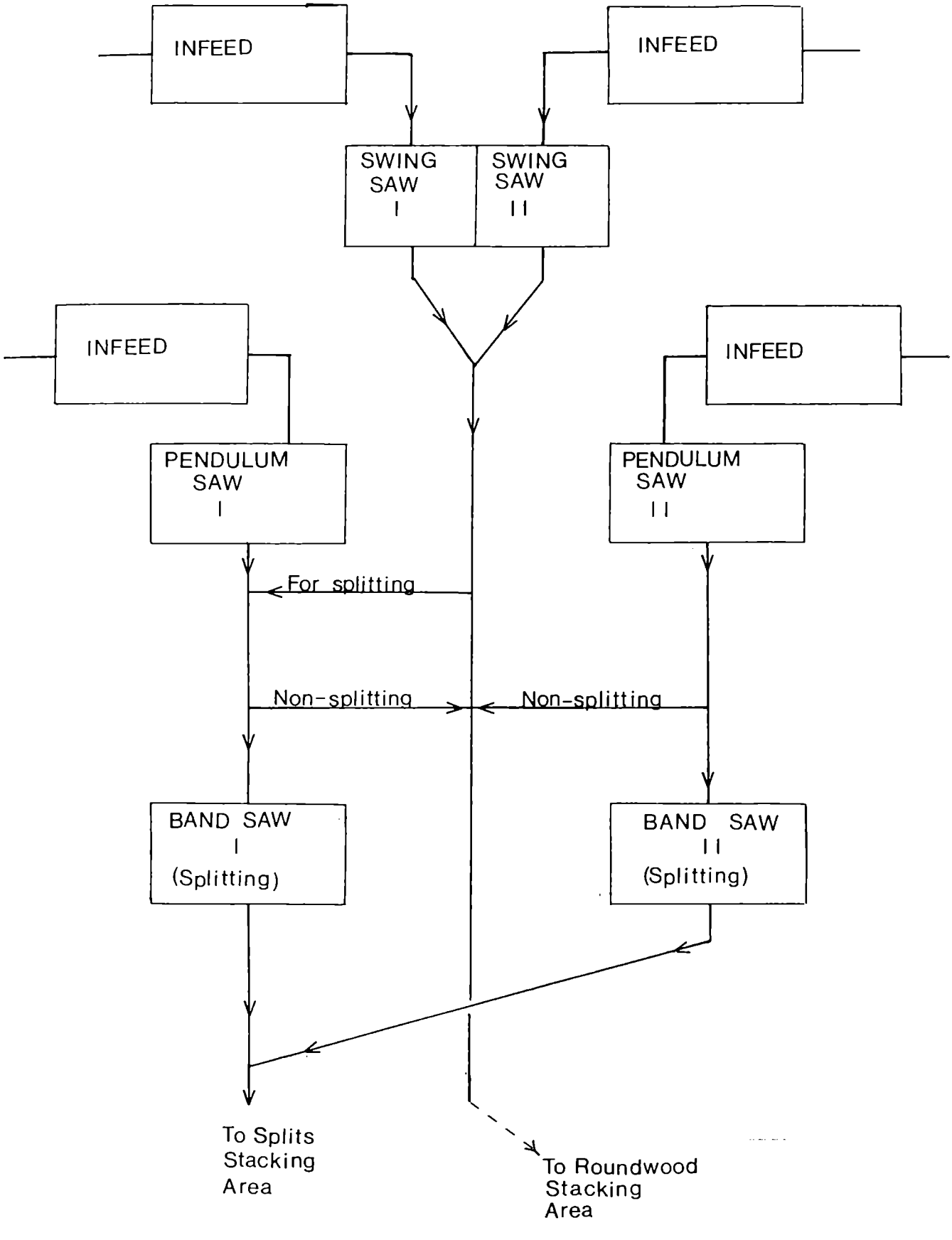
Unit B - Sawline Complex (see Figure 5)

51. A new Unifeed Sawline Complex will replace the existing Pendulum and Swing Saw Lines, including the Band Saw, and will house 2 Pendulum Saws, 2 Swing Saws and 2 Band Saws. The exact specification of the building will depend on the saw system chosen and the final layout agreed but based on the schematic layout as illustrated in Figure 5, a building of 60 metres x 15 metres would appear appropriate.

The building could be divided into:-		£
(a)	34 metres x 15 metres (510 m²) covered with side cladding @ £40/m²	20,400
(b)	26 metres x 15 metres (390 m²) Dutch Barn type with no side cladding to facilitate infeed and outfeed operation @ £25/m²	9,750
	Total building costs	£30,150

Diagramatic Presentation of Proposed Sawline Complex

Fig. 5



Provision also for:-		£
(a)	2 new Pendulum Saws with infeed system	30,000
(b)	2 new Swing Saws with infeed systems	8,000
(c)	3 lines of powered conveyor with cross-transfer facility	10,000
(d)	2 new Band Saws and infeed/outfeed system	50,000
(e)	3 lines of powered conveyor to stacking area	9,000
(f)	Full dust extraction system on all rows	8,000
(g)	Compressed air operation for extractive systems	2,500
(h)	Controls for cross-over transfer	3,000
(i)	Provision for Autostacking, if available, and selector	10,000
(j)	Dismantling existing structures as required	500
(k)	Installation and site costs	3,000
(l)	Fittings and incidentals	1,000
(m)	Power extension as required (50 metres)	2,500
(n)	Tarmac surround (1000 m^2) and drainage	3,500
	Equipment total	141,000
	Equipment cost	141,000
	Building cost	30,150
	Total cost	171,150
	Less sale of Surplus Saws	1,700
		£169,450

Unit B Total Cost = £169,450 (£169.5 thousand)

Unit C - Industrial Staff Room Complex (for up to 45 staff - 30 + regular)

52. A new building will replace the existing primitive accommodation and will provide more space and better facilities.

Provision will be made for:-

(a) Adequate sized (12 metres x 6 metres) main rest room with tables, chairs, etc (72 m^2)

(b) Small kitchenette off (a) with basic cooking facilities (3 metres x 3 metres) (9 m^2)

(c) First Aid Room with facilities and bed (3 metres x 3.5 metres) (10.5 m^2)

(d) Toilet and washing facilities (geared to promote adequate facilities at peak use times), 8 hand basins, 4 urinals and 3 WCs (18 m^2)

(e) Coat/Drying room (4 x 4.5 metres) (18 m^2)

(f) Allowance for corridors, walls, boiler room etc (22.5 m^2)

Total area = 150 m^2 @ £110/m^2 = £16,500

An allowance of £1,500 should be made to cover fittings and facilities etc and accordingly the cost of the building complete would be £18,000.

Parking for 30 cars should also be provided at an estimated cost of £1,200 including surfaced access to the rest room.

Unit C Total Cost = £19,200 (£19.2 thousand)

The possibility of increasing the facilities slightly to allow for use with visiting parties, meetings etc was noted but not incorporated into the specification at this stage.

Unit D - Workshop Complex

53. The existing workshop which offers no facilities and is in effect merely a covered area under which repair work is undertaken is to be replaced by a workshop with two lean-to sides. One side of the lean-to building to be closed in to provide storage space while the other side would be left open to constitute a covered implement shed.

The overall width to be 15 metres and length to be 15 metres. Height to be a minimum of 5 metres in the main central workshop unit reducing to 3.1 metres at the end of the lean-to. Overall area = 165 m^2 @ £80 m^2 = £13,200. Equipment required for workshop = £1,500.

Unit D Total Cost = £14,700 (£14.7 thousand)

Unit E - Construction of Peripheral Road System

54. It is recommended that a new peripheral road structure is constructed leading from the weighbridge and office to the proposed pre-peeling stacking area, following the northern boundary behind the existing swing saw line (adjoining Cpt S59) returning along the southern boundary to form a complete circuit. This road to be operational on a one way system with appropriate signs. A roundabout to be created at the junction of the circular road adjoining the weighbridge and office area to provide proper flow, priority and ease of turnaround for vehicles using the weighbridge only.

Specification: 1.30 km length circular road incorporating 6.4 metres Road width 8320 m^2
Provision of unloading area adjacent to road at pre-peeling stock site (60 metres x 20 metres) = 1200 m^2

9520

Total area of road system = 9520 m^2

Cost:	Cost per m² Grade and lay stone sub-structure		£0.80
	Lay Macadam (by Contractor)		£2.16
	Allowances for poor ground and miscellaneous		£0.14
	Total cost per m²		£3.10
	Cost of road construction 9520 x £3.10	=	£29,500
	Add sign posts, roundabout construction etc		£1,500
			£31,000

Unit E Total Cost £31,000 (£31.0 thousand)

Note: E(E) Conservancy have a policy of continued surfacing work in the Depot. £6,000/annum approximately is spent on resurfacing and is placed at the most necessary areas. While allowance has been made for the routine ongoing surfacing, quite clearly if it was decided to complete surfacing at one time, a major investment would be required. (This has not been included in the work specification/ costing).

Unit F - Office and Cash Sales Area

55. The existing office is to be replaced and enlarged to provide adequate accommodation for staff. The weighbridge will continue to be operated as an adjunct of the office and the possibility of an area of collected minor produce, to facilitate cash sales, without requiring access to the main work area is being reviewed. Accommodation would consist of:

Head Forester's office	8.4 m²
Forester's office	8.4 m²
2 clerks	14.0 m²
1 weighbridge operator	6.0 m²
3 gangers (+ industrial foreman)	14.0 m²
Kitchenette	7.0 m²
2 Wcs and washing facilities	6.0 m²
Plus allowance for corridors, walls and boiler house 83 m² @ £110/m²	= £9,200

Unit F Total Cost = £9,200 (£9.2 thousand)

56. Total Units Costs and Project Cost

		£	
Unit A	Peeling Complex	186.5	thousand
Unit B	New Sawline Complex	169.5	thousand
Unit C	New Staff Room Complex	19.2	thousand
Unit D	Workshop Complex	14.7	thousand
Unit E	Road Complex	31.0	thousand
Unit F	Office and Cash Sales Complex	9.2	thousand
	Communications System	3.0	
	Total Project Estimate	£433.1	thousand

The cost of the restricted felling in Compartment S59 is not included as it will produce a saleable product. The loss of productive land is negligible.

F. BUDGET SITUATION AND TIMESCALE

57. If no developmental expenditure is approved for Brandon Central Depot under this Project and the current structure and system are allowed to continue, expenditure on replacement of worn out machinery, unsuitable (and unrepairable) buildings, and the provision of certain facilities required to meet existing legislation, will still have to be undertaken.

Thus it is, that a number of items are already included in budget provisions or in budget forecasts.

58. Such provisions include:-

1978/79	Replacement Cambio Peeler	£49.0 thousand
1978/79	Replacement Bark Mill	£25.0 thousand
1978/79	Replacement and extension of Mess Room and facilities	£16.5 thousand
1979/80	Replacement of Workshops and Stores	£13.2 thousand
1979/80	Replacement of Office Complex	£9.0 thousand
1979/80	General Site Works and Replacement Plant etc	£10.0 thousand
1980/81	General Site Works and Replacement Plant etc	£10.0 thousand
1981/82	General Site Works and Replacement Plant etc	£10.0 thousand
1982/83	General Site Works and Replacement Plant etc	£10.0 thousand
	Total already budgeted	£152.7 thousand

Hence, of the total forecast project cost of £433.1 thousand, it will be necessary to spend an estimated £152.7 thousand on sustaining present throughput and on bringing facilities up to standard. The additional cost involved in providing for an increased throughput, improving efficiency and in reducing unit costs will be £280 thousand.

59. If budgets are approved the Mess Room Complex will be completed in 1978/79 and the Workshops and Offices in 1979/80. Also the cost of the part of the Peeler Complex, including Bark Pulveriser, is budgeted in principle for 1978/79 but it may be 1979/80 before the complete unit can be installed. The completion of the peripheral road will be necessary before the peeler unit can become operative and as such could be considered for construction in 1978/79.

60. The new sawline complex requires significant planning, design and discussion and it is considered likely that such a development may not be undertaken until 1979/80. All new structures can be built without direct interference with the buildings they are replacing and therefore the timescale is not critical from that point of view.

G. DISCUSSION AND RECOMMENDATIONS

(a) Review.

61. From the preceding sections it is clear that a major reinvestment will be required to bring the Depot from its present state into a fully structured and balanced unit. It is clear that the capacity of the Depot is inadequate even to cope with the present throughput on a sustained basis and that many

/of the machines

of the machines are inefficient by virtue of age, type or position in the working system. Faced with an increased potential throughput, legal requirements, the need for improved staff conditions etc, a new structure is the only prospect for satisfactorily meeting the demand and requirements placed on the Depot.

62. The Working Party considered it inadvisable and (in the longer term) uneconomic to consider grafting new machinery or equipment onto the existing system and for that reason have largely recommended a completely new range of machines. This argument is supported by the fact that it will probably be essential for maximum efficiency to buy a complete system, e.g. sawlines, peelers etc. It is recognised that outside firms do design and supply units to customers specifications and it would be difficult, probably more costly, and possibly less efficient, for such systems to be constructed by Commission staff from component machines.

63. The emphasis is placed on a complete change-over to the new structure. Partial or piecemeal change would not provide the savings suggested in Section D and could present practical problems, e.g. if electrical supply was constantly being changed as new machines were phased in. It is suggested that new complexes are constructed and that transition takes place at one time and not over a period of time.

64. It is not considered possible, practicable or desirable to install extra machine capacity in the Depot without some form of restructuring and modified layout. A new structure would have potentially significant financial savings viewed in terms of cost per unit processed and many non-tangible advantages would also be gained. The Working Party recommends that a Phase III development be undertaken in which detailed plans in accordance with the framework laid down in this report are drawn up and, subject to budget approval, implemented.

(b) Effects on Workforce Numbers.

65. The proposals detailed in this report will obviously change the deployment of the work staff. Excluding reduction in manual stacking, the peeling complex and sawline complex will probably require the same number of men as at present. This means a 40% increase in throughput could be achieved by increasing the number of processing jobs by up to 4 but corresponding reduction in ancillary operations would release an equivalent number of men from lorry transport, bark dumping etc. Overtime would not be needed.

66. There might in the longer term be some reduction in labour if autostacking was introduced to any degree. Stacking the larger elements automatically, while continuing to hand stack smaller pieces could eliminate 3 men, and fuller autostacking up to 5 men, allowing for the retention of autostacking supervision. Such jobs could be phased out by natural processes (retirement, resignations, etc) and no redundancy is necessary. Recruitment of some young staff is advocated to balance the old workforce.

R O SMITH
Work Study Officer
Thetford
March 1978

Appendix IIc

WORK STUDY BRANCH

EASTERN ENGLAND WORK STUDY TEAM REPORT NO 52

TO CONSERVATOR E(E)

BRANDON CENTRAL DEPOT

PHASE IIa REPORT

Ref: 040/77/21

Contents	Para No

Distribution: Conservator E(E) - 12
Conservator, H&M Division, HQ - 3
Chief Work Study Officer
Work Study Team Leaders
Work Study Library

BRANDON CENTRAL DEPOT

PHASE IIa REPORT

Ref: 040/77/21

INTRODUCTION

1. Following the submission of the Brandon Central Depot Phase II Report, a meeting of the Brandon Depot Working Group and Headquarters staff was held on 20 June 1978. It was agreed that further information should be provided to develop and amplify certain aspects of the Phase II Report. Such amplification would include the following main points:-

2. (a) Demand

Investigation into future N.C.B. pitwood requirements. Also, the views of woodwool firms and technical experts (P.R.L. and T.R.A.D.A.) to be sought on future trends in woodwool usage.

(b) Supply

A table showing forecasts of the raw materials available from Thetford and North Norfolk District to be provided.

3. (c) Depot Working

The advantages of Brandon Depot working to be determined against forest working, for pitwood.

4. (d) Machinery Costings

The basis of the machinery costings in the Phase II Report to be recorded.

5. (e) Appraisals

New appraisals to be prepared on the basis of:-

(i) Present layout and throughput plus required H.A.S.A.W.A. improvements, with machinery replaced where due.

(ii) Improved layout as in the Phase II recommendations with increased throughput on two shift, one shift and one shift plus overtime working.

SUMMARY

6. Supply and demand data are presented, which show that a supply of suitable depot material can be made available rising to the target input of 70,000 m^3 in the period 1982 - 86. This input is equivalent to a product out-turn of about 56,000 m^3. Demand is forecast to rise to 54,000 m^3 by 1982 - 86 and to about 56,000 m^3 by 1992 - 96. In addition, it is possible that B.C.D. may be able to fill quotas of peeled pitwood for other Conservancies at greater financial benefit to the Commission.

7. Tabulated pitwood costing figures demonstrate considerable savings due to depot working. The latest (1977/78) statement of account for Brandon Depot is appended (Appendix I) and confirms the viability of the Depot at present levels of throughput.

8. The basis of the machinery costings are stated.

9. Appraisals on the basis of shift working suggest that 2-shift working shows no significant advantage, while single shift (with overtime if necessary) is likely to permit greater flexibility in dealing with the frequent peaks and troughs of demand.

DEMAND

10. N.C.B.

In 1977 the consumption of round and split mining timber in N.C.B. deep mines was 233,000 m^3 (16,000 m^3 less than in 1976) but coal output also fell by 3 million tons. Against these figures, a reduction of 17% in the volume of imported round-wood and splits was achieved. The N.C.B. policy of increasing the home grown proportion is to be continued, aiming at 70% in English pits by the end of 1979 (from 56% in 1977). It seems likely on the evidence of early results in 1978, that the N.C.B. production bonus scheme may have a significant effect in increasing coal output and hence timber consumption.

11. In September 1977, Conservator, Harvesting & Marketing, sought the N.C.B. view on their possible requirements from B.C.D. over the coming decade. Their reply in April 1978 advised caution on forecasts beyond 10 years, but suggested that the demand for pitwood from B.C.D. might remain at its present level (30,000 m^3/annum) into the next decade. Conservator, Harvesting & Marketing's advice was that a marginal increase of up to 10% above present B.C.D. pitwood production may be possible. The 1978/79 contract has (in fact) risen to 32,000 m^3.

12. Woodwool

Sales of woodwool billets peeled and dried to 1.4 - 1.6 m^3/tonne from East England have ranged in recent years from 10,300 - 14,000 m^3/annum, all of which is now produced at B.C.D. These sales have been made in a period during which the level of industrial and public building has been very low indeed. Most of the B.C.D. output goes into the production of woodwool - cement slabs used in the construction industry, while a little goes to firms producing woodwool for packaging. East England have recently consulted their two major customers, British Gypsum and Torvale Building Products, and also specialists at P.R.L. and T.R.A.D.A. (through Mr J Aaron, Utilization Officer, Forestry Commission, H&M Division) for their views on the future of woodwool in building. Both customers gave very cautious forecasts in the present economic climate and suggested that no change is likely over the next 10 - 15 years, but added that a breakthrough is possible into new building concepts, other than flat roof decking. Other uses are widespread in Europe and it is known that both firms are developing suitable systems. For example, Torvale have a double woodwool slab/concrete filling walling system and are considering an expansion of their 'Thermacoust' plant at Stanton, Bury St Edmunds, Suffolk, though not in the next 5 years.

13. Torvale's demand from B.C.D. is forecast at not less than 7,000 m^3/annum, rising to 14,000 m^3 should their plant expand. They may, however, purchase increasing quantities of unpeeled material.

14. British Gypsum since giving their views have decided to close their woodwool

/slab plant

slab plant in November 1978. It is hoped that Torvale will take up British Gypsum's share of the market.

15. T.R.A.D.A. suggests that the woodwool cement slab market will at best recover slowly and that there could be a small relative decline. Problems with the building regulations are mentioned. P.R.L. states that the product is a good insulant and can meet the requirements of the building regulations. The material is said by P.R.L. to have considerable potential but needs further technical development.

16. In view of recent sales the forecast of demand is as follows:-

1978 - 81	12,000 m^3/annum
1982 - 86	13,000 m^3/annum
1987 - 91	14,000 m^3/annum

17. Total expected demand is therefore estimated as follows:-

	1978 - 81	*1982 - 86*	*1987 - 91*	*1992 - 96*	
N.C.B.	30	33	33	33	
Woodwool	12	13	14	15	'000 m^3
P.S.R.	5	5	5	5	u.b.
Firewood	3	3	3	3	
	50	54	55	56	

SUPPLY

18. The following figures are the Thetford and North Norfolk District Production Plan as at 31 March 1977. The figures are in'000 m^3 over bark and are the summation of thinning and felling volumes.

	1977 - 1981		*1982 - 1986*		*1987 - 1991*		*1992 - 1996*	
	Pine	*All Conifers*	*Pine*	*All Conifers*	*Pine*	*All Conifers*	*Pine*	*All Conifers*
To 7 cm top diam	163.4	170.4	213.5	222.9	236.0	242.8	241.1	249.9
To 18 cm top diam	101.0	105.0	152.6	157.7	175.2	177.6	177.7	182.0
∴ 7 - 18 cm top diam	62.4	65.4	60.9	65.2	60.8	65.2	63.4	67.9
Less 5% for poor form	= 59.3	62.1	57.9	61.9	57.8	61.9	60.2	64.5

Included in the 7 - 18 cm diameter volume forecast are the following pulp and chipwood quantities:-

Bowaters	7,000
Weyroc	8,000
P.I.M.	7,000
Kronospan	6,000
	28,000 m^3 o.b.

(Headquarters Sales Plan dated 19 May 1978)

This figure must therefore be subtracted from the last line to give a true figure for small wood entering B.C.D.

= 31.3 34.1 29.9 33.9 29.8 33.9 32.2 36.5 '000 m³

In addition, from the 18 - 24 cm top diameter forecast the following volumes are available for woodwool and large pitwood leaving ample sawlog volume for the 10 year long term contracts and for auction:

32.0 32.0 36.0 36.0 41.0 41.0 40.0 40.0 '000 m³

When added to the previous line, this gives the total B.C.D. material available:

63.3 66.1 65.9 69.9 70.8 74.9 72.2 76.5 '000 m³

Less 20% conversion loss gives under bark product volumes available to meet demand figures:

50.6 52.9 52.7 55.9 56.6 59.9 57.8 61.2 '000 m³

/ Demand = 50.0 54.0 55.0 56.0 /

19. The possibility of taking over product quotas from other Conservancies, principally N.C.B. material, should perhaps be also considered, particularly as production costs, (shown later) are lower in E(E).

20. On the evidence of these figures it is not likely that supply should ever fail to meet demand. However, it should be borne in mind that Aldewood Forest, Suffolk, is working similar timber and could be utilised if necessary, haulage to B.C.D. being only slightly greater than from outlying areas of North Norfolk.

21. DEPOT/FOREST WORKING

The table below prepared by Mr Busby, P&E, from Headquarters information, highlights the savings per m^3 by depot working as opposed to forest working in NE(E) and the low cost overall of E(E) depot working.

ESTIMATED COSTS (INCLUDING ONCOST) OF PRODUCTION OF PEELED PROPS OR SPLITS

£/m^3 u.b.
(output measure)

	140 mm					*150 mm*				
Conservancy	*Load and haul to Depot*	*Peel*	*Crosscut stacking etc*	*Split*	*Total*[1]	*Load and haul to Depot*	*Peel*	*Crosscut stacking etc*	*Split*	*Total*
1976/7										
E(E) Depot	0.90	0.78	3.05	1.60	6.33	0.90	0.78	2.49	1.60	5.77
S(W) Forest	-	4.30	2.30	3.50	10.10	-	3.30	1.90	2.85	8.05
1977/8										
NE(E) Forest	-	5.34	5.20	2.50	13.04	-	4.19	4.10	2.51	10.80
NE(E) Depot	1.26	4.00	4.05	2.00	11.31	1.26	2.20	2.30	1.90	7.66
E(E) Depot	1.20	1.40	3.75[2]	1.35	7.70	1.20	1.40	3.36[2]	0.99	6.95
S(W) Forest	-	5.20	2.40	3.90	11.50	-	4.65	1.95	3.60	10.20

Notes: 1. Sum of costs of producing peeled props + cost of splitting. Does not necessarily represent total cost of splits. In NE(E) in particular the total cost of splits is only 60 - 80% of the figure shown because large numbers of very small props are produced.

2. Adjusted to give correct total cost.

22. The Working Group also considered the various non-tangible advantages of depot working as compared to forest working and these are grouped as follows:-

(a) Greatly improved working conditions incorporating a good work environment and facilities (e.g mess/wash/toilet and first aid) for the workforce.

(b) Enhanced safety aspects and ergonomics e.g. purpose made static machines, reduced manual handling and reduced problems with dust, sawdust etc.

(c) Extended working hours with lighting etc and elimination of wet time elements.

(d) Facility of using electrical power, helping to reduce noise (cf diesel engines or power take-off). Static machines are also inherently quieter).

(e) Improved communications important for marketing, control and safety.

(f) Closer and easier supervision.

(g) Efficient waste dosposal and marketing is possible.

(h) Conversion tends to be maximised, reducing waste wood percentage.

(i) On-site mechanical back-up and repair facilities are constantly available.

(j) A weighbridge facility is available.

(k) Stock holding and provision of good service by the Forestry Commission in a depot is a useful price-bargaining point.

(l) Seasoning conditions in the forest are often poor.

(m) Forest working would increase loading and overall haulage costs to the mines.

(n) Forest working would tend towards the development of small depots without most of the above advantages.

23. The 1977/78 B.C.D. trading account is appended at the end of this report (Appendix I) and shows the complete breakdown of costs and incomes.

24. A synthetic cost exercise between depot and forest working was attempted but the lack of availability of information relating to the specific conditions under which work would take place meant that meaningful comparisons were not possible. It is considered that the actual figures in paragraph 21 are a more realistic guide.

MACHINE OUTPUTS AND BASIS OF COSTINGS

25. Processing Costs - Peeling

(Paragraphs 36 - 44 of the Phase II Report refer).

In particular, details of wages and VME charges are explained in paragraphs 38 and 39.

With regard to expected peeler throughput, as these form the gateway to the

/system

system, the following calculations were used:

26. Current System

Cambio No 1 (electric) 71 - 35 maximum diameter 35 cm
Theoretical throughput loaded = 31.7 m/min
Actual " " = 61,538 m/week (= 1,139 m^3)
= 25.5 m/min
∴ For 2 Cambio's = 51.0 m/min
which for Cambio poles and long butts of average volume 0.07 m^3 and 0.13 m^3 respectively = 0.94 m^3/min

27. Proposed System

2 Cambio 71 - 45 maximum diameter 45 cm (as determined in Phase II Report).
A variable feed speed gives the following rates of throughput:

	*Throughput/machine**	*Net throughput (2 machines)***	*Existing throughput (2 machines)****	*% Extra capacity on present throughput*
Speed 1	72.6 m/min	116.2 m/min	51 m/min	128%
Speed 2	47.3 m/min	75.7 m/min	51 m/min	48%
Speed 3	36.3 m/min	58.1 m/min	51 m/min	14%
Speed 4	23.0 m/min	36.8 m/min	51 m/min	−28%

* Figures from manufacturers information.
** Assumes 20% downtime (as assumed in Phase II Costings) to give net throughput.
*** See paragraph 26 - One speed only.

Such figures indicate that the new system will cope quite adequately at Speed 3 with the present throughput especially as existing Cambio's are only 73% and 46% utilised and Speed 3 provides 14% extra capacity above this. Accordingly, it is considered that even with a 40% increase in throughput (up to 70,000 m^3), Speed 3 should normally prove sufficient.

This can be confirmed by a comparison of working hours required (1,200 hours being accepted as equivalent to 1 year's effective 1 shift work time):

Existing throughput 50,000 m^3 ≡ 2.7 million m lineal @ 51 m/min = 882 hrs (existing Cambio's)
Increased throughput 70,000 m^3 ≡ 3.8 million m lineal @ 51 m/min = 1,241 hrs (existing Cambio's)
@ 116.2 m/min = 545 hrs (New system/Speed 1)
@ 75.2 m/min = 836 hrs (New system/Speed 2)
@ 58.1 m/min = 1,090 hrs (New system/Speed 3)
@ 36.8 m/min = 1,721 hrs (New system/Speed 4)

Speed 3 should therefore manage the programme within the normal time. There are, however, doubts about the acceptability of peeling quality at the higher speeds and this is currently being investigated with the manufacturer.

28. Alternative peelers Esterer-Linck ER55 (maximum diameter 55 cm) and Johanson Chej 660 (maximum diameter 66 cm) were examined and they produce comparable performances with the Cambio.

29. The crosscutting outputs (paragraph 41) are rather more self-explanatory employing standard outputs/hour for the various saws.

30. Capital Costs Estimates (paragraphs 50 - 51)

The major source of the capital cost was a written estimate from Boving and Company Limited, Villiers House, 41 - 47 The Strand, London WC2N 5LB. This took the form of a without-prejudice tender and was numbered 15738, dated 15 February 1978 and was valid for 40 days from that date.

Discussion and verbal quotes with the following firms validated the Boving estimate:

Dankaerts Limited
Kunz Engineering (Linck Equipment)
Johanson (Chej Equipment)

31. Precise estimates of machinery costs will form part of the Phase III Report.

At the time of writing, Eastern England are in contact with the above firms, hoping to refine such estimates by specifying the systems required, the details of which have become clearer following visits to sawmills in Germany and Scotland (joint report by M H Dinning, R O Smith and G Hobbs).

APPRAISALS OF SHIFT SYSTEMS

32. The Working Group, headed by District Officer, Thetford, in this instance, compiled the following three appraisals, using local budgetary information and P&E figures as a base.

33. Cost/Income Appraisal for 50,000 m^3 intake and minimum investment (based on FY 77/78 values).

Costs	*Wages*	*Cash*	*VME*	*Oncost*	*Total*	Totals (£'000)
Cost of felling, extraction, etc @ £4 per m^3						200.0
Carriage to B.C.D.	14.0	3.7	32.5	5.6	55.8	
Peeling	20.0	4.2	19.6	8.0	51.8	
Bark Processing	0.2	0.2	3.9	0.1	4.4	
Crosscutting	50.3	1.1	34.9	20.1	106.4	
Splitting	15.3	0.5	12.9	6.1	34.8	
PSR Production	7.6	0.7	7.7	3.1	19.1	
Rehandling	6.8	-	3.5	2.7	13.0	
Measure and Grade	7.6	-	-	3.1	10.7	
Load - Pitwood	5.2	-	2.9	2.1	10.2	
Woodwool/ other	1.6	0.6	1.0	0.6	3.8	
	128.6	11.0	118.9	51.5	310.0	310.0
Carriage from B.C.D.						112.6
Additional VME - replacements and ancillary works						15.0*
Annuitised cost of peripheral road and maintenance						3.0
Rental on B.C.D. site: 5% of £230.0						11.5
					Total cost	652.1

Income (Assumes 20% loss in conversion excluding bark sales)			
Pitwood	27,500 m^3	@ £33.05	£908.9
Woodwool	9,600 m^3	@ £25.40	£243.8
PSR	1,050 m^3	@ £27	£28.4
Special Poles	150 m^3	@ £70	£10.5
Firewood	1,700 m^3	@ £5	£8.5
Bark	2,500 m^3	@ £4	£10.0
			1,210.1
		∴ Surplus =	558.0
		=	£11.16/m^3

NOTES: 1. Quantity peeled in FY 77/78 was 54,707 m^3
Therefore to convert figures from FC 32/48
for 50,000 m^3 use factor of (50,000 divided by
54,707) i.e. 0.914.

2. For carriage, quantity was 52,117 m^3
Therefore factor = 0.960

3. Overtime allowed is consequently pro-rata with
actual for FY 77/78.

4. Machinery as per Mr Busby's original costing, viz:

3 FE Loaders
1 Fork Lift
1 Cambio (E) 1 Cambio (T) /E = Electric
T = Tractor-powered/
1 Bark Mulcher
1 Pendulum Saw
1 Band Saw
3 Swing Saws
1 Coles Crane

*5. Allowance for updating machinery/contingencies:

New Peeler/Bark Mill	7.1	(Full depreciation values added to update FC48 values)
Miscellaneous/H.A.S.A.W.A. Adjustments	7.9	
	15.0	

6. Figures are exclusive of 12% secondary oncosts on VME.

34. Cost/Income Appraisal for 70,000 m³ intake after modernisation (single shift working) (costs based on FY 77/78 levels).

Costs	*Wages*	*Cash*	*VME*	*Oncost*	*Total*	Totals (£'000)
Cost of felling, extraction, etc @ £4 per m³						280.0
Carriage to B.C.D.	19.6	5.2	45.5	7.9	78.2	
Peeling	19.2	4.5	27.0	7.7	58.4	
Bark Processing	0.8	1.0	12.9	0.3	15.0	
Crosscutting	50.0	1.3	42.5	20.0	113.8	
Splitting	15.0	0.8	14.7	6.0	36.5	
PSR Production	20.0	2.3	16.0	8.0	46.3*	
Rehandling	8.0	-	4.3	3.2	15.5	
Measure and Grade	10.0	-	-	4.0	14.0	
Load - Pitwood	6.2	-	3.5	2.5	12.2	
Woodwool	3.2	1.2	2.0	1.3	7.7	
	152.0	16.3	168.4	60.9	397.6	397.6
Carriage from B.C.D.						157.6
Annuitised cost of peripheral road and maintenance						3.0
Rental on B.C.D. site						11.5
					Total cost	849.7
Deduct miscellaneous savings						13.6*
					Adjusted total cost	836.1

Income (Assumes 20% loss in conversion excluding bark sales)

Pitwood	33,000 m³ @ £33.05	£1,090.7	
Woodwool	14,000 m³ @ £25.40	£355.6	
PSR	5,000 m³ @ £27	£135.0**	
Special Poles	500 m³ @ £70	£35.0	
Firewood	3,500 m³ @ £5	£17.5	
Bark	6,500 m³ @ £4	£26.0	1,659.8
		∴ Surplus =	823.7
		=	£11.77/m³

NOTES: 1. Costings based (a) on machinery detailed in body of report (outlined below) and (b) an extrapolation from actual costs for FY 77/78.

2. Machines:
- 2 Peelers
- 1 Pulveriser (bark)
- 2 Pendulum Saws
- 2 Swing Saws
- 2 Band Saws
- 3 FE Loaders
- 1 Fork Lift Truck
- 1 Coles Crane

3. The static machinery/installations provide for over-capacity all round (some 30% + over) and eliminate the need for overtime. There may consequently be scope to effect economies in the final selection of equipment in Phase III (on the basis that a measure of overtime would be acceptable).

*4. Overtime, wet time, etc as per Mr Busby's costing (based on savings outlined in report).

**5. Some increased PSR production assumed to improve utilisation and machinery usage.

6. Figures are exclusive of 12% secondary oncosts on VME.

35. Cost/Income Appraisal for 70,000 m^3 intake and double shift working (based on FY 77/78 values).

Costs	*Wages*	*Cash*	*VME*	*Oncost*	*Total*	Totals (£'000)
Cost of felling, extraction, etc @ £4 per m^3						280.0
Carriage to B.C.D.	19.6	5.2	45.5	7.9	78.2*	
Peeling/Mill bark	13.5	5.5	34.0	5.5	58.5	
Main Conversion	112.0	4.4	67.5	44.8	228.7	
Measure and Grade	12.0	-	-	4.8	16.8	
Load - Pitwood	6.2	-	3.5	2.5	12.2	
Woodwool	3.2	1.2	2.0	1.3	7.7	
	166.5	16.3	152.5	66.8	402.1	402.1
Carriage from B.C.D.						157.6
Annuitised cost of peripheral road and maintenance						3.0
Rental on B.C.D. site						11.5
Add extra supervision and maintenance						5.0
					Total cost	859.2
Deduct miscellaneous savings						13.6**
					Adjusted total cost	846.6
Income As for paragraph 34.						1,659.8
					∴ Surplus =	813.2
					=	£11.62/m^3

NOTES: 1. Working week assumed to contain 65 hours and labour costs marked up by 20% as shift allowance.

*2. No change from single shift working.

3. Assume 1 Cambio and 1 Auxiliary Peeler for stakes. Assume 2 Pendulum saws and 1 Splitter and integrated PSR production. Assume single shift for loaders.

**4. As for costing for normal (single shift working).

5. This is an empirical costing and the practicability of operating a double shift has not been critically examined.

6. Figures are exclusive of 12% secondary oncosts on VME.

36. In comparing the three systems, it is clear that the figures for £ surplus/m^3 are virtually the same throughout. Hence the Working Group's conclusion is that single shift working should be adopted (with overtime if required) as it offers the greatest scope for flexibility of working, and represents the best system from social, logistical, environmental and workforce points of view.

FURTHER STUDY - PHASE III

37. The project plan for Phase III is appended and seeks to finally co-ordinate the actual design of the new depot layout, with budget estimates, and a timetable for its phased implementation in order to minimise interference with routine depot production.

The Phase III plan should be completed by the end of December and tenders for work sent out early in 1979 if the Commissioners approve the scheme.

M N HAWORTH
Eastern England Work Study Team
October 1978

B.C.D. TRADING ACCOUNT FOR 1977/78 (FINAL)

Expenditure		£'000	Income	£'000
Opening stocks and work in progress		376.5	Sale of produce	1252.8
			Closing stock and work in progress	476.7
H&M Expenditure:				
Purchase of timber	896.6		Misc other income	0.7
Materials and contracts	121.9			
Wages	125.4			
VME (PDC)	85.7			
		1229.6		
Oncost		49.7		
Overheads:				
Supervisory	11.5			
District) Conservancy) HQ)	23.7			
		35.2		
Site rates		1.3		
Misc other expenditure		3.0		
Interest on assets		23.6		
Balance		11.3		
		1730.2		1730.2

Comments

1. See Appendix for Brandon Depot's relative position as a customer on a breakeven basis.

2. The difference between interest at current Treasury rates and the 3% charged in these accounts is not incorporated in the accounts.

3. District, Conservancy and HQ overheads.

   (a) Information derived from Statement of Accounts FY77/78 Form A241.

	FC Working (£)
District overheads	19,230
Conservancy	47,434
HQ	50,864
Total	117,528

   (b) Total industrial man years employed on FC working in E(E) = 154 (FC34 Labour Analysis).

Total industrial man years employed on FC working in Brandon Depot = 31.1 (FC34).

(c) £117,528 x $\frac{31.1}{154}$ = £23,735

4. Payment to local authority in lieu of rates was £1,252.

5. Miscellaneous Other Expenditure: (Source various FC33A - location in brackets)

	£'000	
Surplus estate	0.1	(B.C.D.)
Forest estate	0.7	(B.C.D.)
Forest estate	1.2	(Land Agent East)
Road maintenance	1.0	(Cons. Civil Engineer)
	3.0	

VME Ops expenditure is not included since it is a Distributed Service.

6. Sale of produce figures are derived from Form U6 Part D for B.C.D. March 1978 (vol); unit prices taken from B.C.D. 77 - 78 contracts.

	Volume	Unit Price	Total Revenue
Special poles	161 m^3	£70.00*	£11,270
Stakes	1,089 m^3	£26.97	£29,370
PIM	64 m^3	£13.94	£892
Pitwood: peeled	28,458 m^3	£33.05	£940,537
Woodwool billets	9,932	£25.39	£252,173
Firewood	1,717	£5.00	£8,585
Bark	2,500*	£4.00	£10,000
			£1,252,827

*Estimated

7. Interest on Assets

Fixed Assets:

Land and Buildings: A notional figure based on the quinquennium valuation of land and buildings (updated to the year under account).

Land	£201,600	
Buildings	£28,600	
		£230,200

VME: Average value (taken from VME history files) between 31.3.77 (£137,000) and 31.3.78 (£125,800) = £131,400

Total fixed assets £361,600

Net Current Assets:

Material (both Work in Progress and Stocks): Average value between 31.3.77 (£376,500) and 31.3.78 (£476,700)	£426,600
Stores (consumable)	NIL
Net current assets	£426,600
Total assets	£788,200

Interest @ 3% = £23,646

Notes to the Account

1. Opening and Closing Stock and Work in Progress

(a) Opening WIP (76/77 Closing WIP)

Cambio poles) Unpeeled	3,156 m³ @ £17/m³	£53,652
Long butts) Peeled	9,407 m³ @ £19.11/m³	£179,768
		£233,420

(b) Closing WIP (as presented to Audit)

Cambio poles) Unpeeled	3,600 @ £17.17/m³	£61,812
Long butts) Peeled	15,700 @ £18.25/m³	£286,525
		£348,337

(c) Opening Stock (76/77 Closing Stock)

Stakes	128 m³ @ £21.50	£2,752
Pitwood:		
Peeled	1,483 m³ @ £28.08	£41,643
Woodwool	4,110 m³ @ £24.00	£98,640
		£143,035

(d) Closing Stock (as presented to Audit)

Stakes	140 m³ @ £21.50	£3,010
Pitwood:		
Peeled	1,383 m³ @ £30.89	£42,721
Woodwool	3,307 m³ @ £25.00	£82,675
		£128,406

2. Purchases of Timber

(a) Notional price paid by B.C.D. to forests is rideside value at a mid-point between the WIP valuation at the end of 1976/77 (£15.55 m³) and at the end of 1977/78 (£16.13/m³): That is £15.84.

Volume to B.C.D. is 53,030 m^3 (taken from supplementary information to the U6).

53,030 x £15.84	=	£840,000
(b) Haulage of timber to B.C.D. (A/c 03060/1 FC33A Location 114 FY77/78)	=	£56,600
		£896,600

3. Expenditure for (i) Materials and Contracts (ii) Wages and (iii) VME charges are taken from the H&M total expenditure line of March 1978 FC33A for Location 134 (B.C.D.). Excepting for this year that VME is based on budget rather than actual figures due to the mid-term changes to the system of charging.

4. Expenditure for Oncost and Local Supervision are taken from the March 1978 FC33A for Location 134 (B.C.D.).

PROJECT PLAN

No 040/78/11

Project: Brandon Central Depot Phase III.

Object: To prepare a report based upon the broad recommendations of the Brandon Depot Phase I, II and IIa Reports, giving more detailed layout and design proposals together with costings and a time table for the implementation of the developments, so phased as to minimise interference with the maintenance of production in the Depot.

(Note: The Phase IIa Report has not yet been submitted to H&M Division nor the proposed development approved by Commissioners, but the Conservator H&M has suggested that the Phase III Project Plan should be prepared meanwhile, to avoid delay).

Location: Brandon Central Depot, Thetford Forest E(E)

Project Leader: M N Haworth

Other involvement:

a. Mechanical development - Nil

b. Statistical - Nil

Cost:

c.	Staff time - 30 days @ £70	= £2,100	Total cost £2,400
d.	Industrial		
e.	Travelling & Subsistence	= £300	
f.	Cash purchases	= Nil	

Benefits: The provision of designs for the development of Brandon Depot, with the costings and time table required for the necessary budgeting, for tender preparation, and for the implementation of the scheme.

Timing of Study: October 1978 - December 1978

Cross-reference with related studies:

040/7/20	Brandon	Central	Depot	Phase I	Report
040/77/21	"	"	"	Phase II	"
040/77/21	"	"	"	Phase IIa	"

Notes: The Working Party as previously convened will be maintained throughout this final phase.

Commissioned by: Conservator E(E) - M Dinning

Approved by: A J G Hughes, Chief Work Study Officer, 3/9/78

Distribution:

Conservator E(E) - 3
District Officer, Thetford - 3
Mr A R Sutton, H&M Division, HQ
Chief Work Study Officer
Work Study Team Leaders

APPENDIX 11d

MD/JAI

Copies: DO Thetford
WSO Thetford
H/F BCD

FORESTRY COMMISSION,
BLOCK "D",
BROOKLANDS AVENUE
CAMBRIDGE.

Ref: U2/11/1

7 September 1978

H&M Division HQ

Copy: CWSO, Alice Holt

VISIT TO GERMAN LOG YARDS

1. I attach, for your information, two copies of a report on this visit, made in July. The delay in despatching the report has been due to the absence of the participants on annual leave immediately after their return from Germany.

2. The observations made on this tour will be of value to us in the remaining planning stages of the proposed Brandon development.

3. Photographic records of the tour will be available shortly (colour film has not yet been returned from processors), including cine material taken at one of the depots.

M Dinning
Asst Conservator
Harvesting & Marketing

Report on a visit to German Sawmills and to a Sawmill Equipment Manufacturer 16 to 21 July 1978

1. A party comprising M Dinning A/C H&M (E/E), R O Smith, D/CWSO, and G Hobbs H/F i/c BCD visited Germany in order to discuss German experience in the equipment and management of roundwood handling and conversion depots. We sought particularly information on machine selection, layout and performance, and on wood handling systems, with a view to the development of Brandon Central Depot.

2. Our party arrived in Hamburg on Sunday, 16 July, and we were met there by Dr H J Wippermann, of the Work Study Institute of the Federal Research Centre for Forestry and Forest Products. Dr Wippermann was to be our guide and interpreter throughout the visit.

3. On Monday morning, having been welcomed by the Director Dr G Eisenhauer, we attended an illustrated lecture at which Dr Wippermann outlined his basic thinking on sawmill structure and organisation in German conditions. In West Germany, most timber sales are in tree length at roadside, and most sawmill system are also geared to tree length working. This means a capacity to handle material 18 to 21 metres long, or occasionally longer. Off loading of trucks at the yards is often by gantry crane, moving material directly onto the log decks, though small buffer stocks may be kept in case of lorry breakdown. Lorry loads are up to 24 tonnes.

3.1 Log decks are normally three stage, and in some cases their ability to single stems and to relieve tangles is improved by the use of motors of independently variable speed and direction on the various transport chains. Some form of debris removal is also advocated (conveyor belts or cable drawn scrapers beneath the low points of the decks) to minimise manual cleaning.

3.2 Peeling and cross-cutting are normally linked into a single system, with one operation following directly from the other and therefore directly affecting its throughput. Sorting and collection of converted pieces is normally automatic once the appropriate bin has been selected by push-button by the sawyer, and the bins will be cleared usually by gantry crane as required. It was suggested that a throughput of 30-50,000m^3/year might require a work force of 5 to 10 men.

3.3 Other points discussed at this meeting included - the quality of stacking in the bins in autostacking (smaller dimension roundwood had been seen in the films to fall in a tangle).

- minimising material movement in a depot
- our problem of sorting/stacking a great diversity of material including small dimension wood
- the balance of skilled/unskilled operators.

4. On the Monday afternoon we visited the Sagewerk Heinrich Gauster, at Karwitz near Damenberg, Lower Saxony. This mill was cutting Scots pine (with up to 5% spruce) at 35 to 40,000m^3/year. It was working entirely on material from the 1973 windblow, and still has over two years supply stored under sprinklers at a cost of 1 DM (£0.26)/m^3 pa. A single shift 10 hour day is worked, and a 4½ day week.

4.1 Peeling is by a 75mm Valon Kone peeler (VK 325) fed by a 4 stage Esterer log deck. This deck was built too low to the ground to be easily kept free from debris. 20 to 22 stems (15 to 20m length) were being peeled per hour. Dr Wippermann's opinion is that 30 to 40 stems per hour could be peeled. It was apparent that the peeling operation was frequently held up by the rate of cross-cutting.

4.2 Cross-cutting was in two lines. The 'largewood' line directly linked to the peeler used a Dolmar chainsaw operated by a sawyer with a display showing the length and diameter of the stem to be cut. The sawyer also selected the destination bin to which the product was consigned. The 'smallwood' line, locally made, was loaded and unloaded by Volvo loader, and the sawyer used hydraulic length stops and an ocular estimate of diameter in cross-cutting with a circular swing-saw. He also selected the destination bins, and this small, relatively unsophisticated line was working efficiently.

4.3 The roundwood conversion cost in this mill was given as 12 DM (£3.15) per m^3 (peel, cross-cut, sort, measure) including oncosts. Depreciation is charged over 7 years on machinery, 4 years on Volvo loader, 15 years on buildings, pavement etc.

4.4 We felt that the throughput of this depot was poor, with no attempt to achieve nose to tail operation of peeler or cross-cuts. It appeared that this was due to bottlenecks in the sawmill which was supplied by the depot. This experience was repeated several times during our visit. Safety aspects were poor, particularly guarding of infeeds. There was a good deal of spare machine capacity.

5. On Tuesday, 18 July, the party visited Henrich Harling Sagewerk at Eversen. This mill was praised by Dr Wippermann for its design and efficiency. The layout was essentially the same as in most of the mills visited, but the clearance of finished roundwood products from the 'boxes' was by 12 tonne fork lift, giving flexibility of working. Virtually all equipment was of Linck manufacture.

5.1 Tree length material 15-22m long and 25-30cm mid diameter was fed by log decks on two Linck peelers. The material was mainly pine, again stored under sprinklers since the 1973 windblow. Cross-cutting was followed by sorting into 80 'boxes' arranged in three double lines. Only four men are directly involved in peeling and cross-cutting. One operates two peelers, two cross-cut, and one is a 'springer' (trouble shooter). Throughput was by no means nose to tail.

5.2 The Harling mill has a throughput of about 86,000m^3 pa, processing about 5,000 lineal metres per 8 hour day. The owner expects 70% running time from his machines, and recommends a 4 speed peeler used below maximum capacity. The Cambio 45cm peeler was suggested. He had invested 5 million DM (£1.3m) in the roundwood set up, and estimated conversion costs at 16.50 DM (£4.3)/m^3. This was clearly one of the most efficient mills seen, but there were still points on safety which would not be acceptable in Britain. All bark and waste wood was chipped and used to raise steam for the sawn timber kilns.

6. We next visited HuH Luhmann KG at Celle. This mill was equipped by Sanger and Massierer KG, whose representative Mr Karminsky joined us there. The mill is on a site of restricted size, and the gantry covers the entire roundwood working area (80m x 40m + 5m overhang).

6.1 This was a yard of standard German layout, handling 30 to 35,000m^3 pa. The log deck was notable in having variable speed and direction of each longitudinal half of each section, permitting angled logs to be straightened. The deck was sheeted between drive-chains, and bark and debris were cleared from beneath the troughs by cable drawn sledges.

6.2 Log lengths to 24m were handled, of 22-23cm mean mid diameter, both spruce and pine. No peeling was done, since the mill has a good market for chips with bark (to Harling). Cross-cutting was by Stihl chainsaw. The sawyer has a mechanically operated display of length and diameter in relation to his saw. He also selects the destination box for the product.

6.3 In the absence of peeling, only two men operate this yard - a crane driver and the cross-cut operator. The crane driver must therefore act also as 'springer' in case of trouble. These men work from 7.00 to 17.00 hrs daily, with a one hour break.

7. On Wednesday, 19 July we visited the mill of Firma Ernst Schaeffer KG at Laasphe, Westfalia. This mill replaces one destroyed by fire in 1976, and has been running for only 10 months. The equipment was entirely by Linck. The layout was typical except that the firm had elected to cross-cut before peeling. The reasons for this were that it was easier to 'see the quality of the wood' in bark (not entirely acceptable) and that the lack of space on this restricted site made it difficult to accommodate movements of tree length wood into both peeler and cross-cut. The site is covered by gantry crane.

7.1 Throughput at Laasphe is 35,000m^3/year. The mill has the advantage of access (at 250km) to W Europes first thermo mechanical pulp mill, which accepts chips with not more than 0.8% bark. Bark from the peeler is passed (at no charge) to a 'buyer' who processes it for horticultural use. The mill is one of 6 forming an association served by one buyer who purchases 200,000m^3/year for them. All is spruce, from state and community forests, all in tree length.

7.2 The input was in stems 17-18m long by about 21cm mean mid diameter. They are peeled in a 75cm Esterer Linck machine at 15m/minute, and are sorted into 29 'boxes'. Because of the space restrictions, the boxes are double rowed on either side of the conveyor. It should be noted that the inner boxes of double sets can only be cleared by overhead crane.

7.3 The mill works an 8½ hour single shift day.

8. We were met at Laasphe by Herrott, of Gebruder Linck KG. He conducted us to the Linck factory at Oberkirch, Baden, and while there we visited two other mills.

9. The Keller mill at Oberachern was on conventional lines with Linck equipment, but the configuration of the log deck seemed to be causing problems with the timber available (up to 22m). The throughput was said to be 40,000m^3 pa and the roundwood equipment had cost 2 million DM (£½m).

9.1 The whole area was served by a gantry crane, serving a log deck on an Esterer Linck 75cm peeler. Siemens electronic measurement and display was available to the cross-cut operator, and produce was again sorted into double 'boxes'.

10. The Roth mill in the Black Forest area was a 'local' type family sawmill handling 15,000m^3 pa, with fairly simple systems, and a relaxed atmosphere.

11. At the Linck factory, we saw the processes in the manufacture of sawmill machinery by a long established firm. The standards of sturdiness, accuracy and quality control were impressive.

11.1 Discussions were held with senior design staff on the requirements of Brandon Depot. Some of the main differences which we had to stress to Linck between our operations and those of the German depots seen were:-

(a) For market reasons, we are handling 4 to 8m material, and not tree length.

(b) We do not have an immediate manpower shortage, in fact we wish to reduce the workforce only slowly and by natural wastage.

(c) We are not seriously short of space.

(d) We have a larger number of products (over 100) and some specifications are of small size. We have not seen satisfactory automatic stacking of short lengths.

(e) Peeling and cross-cutting are not linked. We can maximise the output of both stages, by having the necessary drying phase in between as a buffer against hold-ups in either.

(f) We have high safety requirements.

(g) Good results are obtained using our 'primitive' measuring systems, and there may be little advantage in using the latest in electronic technology at high capital cost.

11.2 The Linck staff appeared to understand our requirements, and will prepare for us (without obligation of course) preliminary drawings of systems which may fulfill our requirements at Brandon. Both 'simple' and more technically advanced layouts will be suggested. The firm will of course be interested to tender competitively if and when we are able to prepare final specifications for developments at Brandon.

12. The visit was of considerable value to us in demonstrating the range of modern round wood handling, measuring and processing equipment available. Brandon requirements are however different in some respects from those of any one of the depots seen in Germany, particularly as to input specification, number and size range of products, and the need to link the peeling and cross-cutting processes. Some of the observations made on this tour may be summarised as follows:-

12.1 Control cabins (for peeler or cross-cut operators) can be light, with very low noise levels, fresh air, good seating and excellent visibility. They need not be heavy and unattractive to be quiet.

12.2 Gantry crane operation was almost universal in the yards seen in Germany, especially on small restricted sites where it is a great convenience if used only to load log decks and to off-load 'boxes' onto sawmill infeed decks. At Brandon, with such a large area to be covered (because of the drying stage and the variety of finished product specifications) it is not practicable. A single crane could not deal with lorry loading (6 to 9 pitwood/woodwool lorries per day) and also keep log decks supplied and outfeeds clear. The one yard visited which was of Brandon capacity used fork-lifts as well as the gantry crane.

12.3 A variety of log deck designs was seen. It seemed that a three stage deck should be adequate to single logs, particularly if motor speeds could be varied independently to straighten angled stems. Belts at the lowest points should remove most bark and debris automatically and the decks should otherwise be sheeted between the chains. Decks must in any event be high enough for easy access beneath.

12.4 Sophisticated electronic length/diameter measuring and display equipment is available to assist the sawyer in getting the best assortment from a log where tolerances are tight. Such equipment is however very expensive and the 'shunting' of the log to achieve close tolerances makes for slow working. Faster cross-cut lines are those employing mechanical/hydraulic/pneumatic stops.

12.5 Automatic stacking of roundwood in fixed 'boxes' alongside a conveyor is simply achieved, and the number of boxes is only limited by cost and available space. However, pieces under about 1.5 metres often fall in a tangle, or spill from the boxes. Also, for Brandon purposes, props would still have to be off-loaded from the boxes into some sort of pallet to await loading to lorry.

12.6 Cross-cutting by chainsaw as favoured by many German mills is slow. The faster lines use a large diameter pendulum circular saw, though blade changing is a more difficult operation with that type.

12.7 Good surfacing of yards is essential, and simplifies the maintenance of really clean conditions, essential around machinery.

12.8 Shift working in German yards appears to be uncommon. Herr Gauster explained that the ups and downs of the market make it undesirable to recruit a second shift. Men cannot easily be dropped at the next down turn because of job security/compensation arrangements and labour costs are extremely high. Thus owners go for high output from the minimum number of men on one shift (of perhaps 10 hours) and for spare machine capacity to cope with variations in the output required.

13. Our thanks are due to the Commissioners for permitting this visit, to our hosts in Germany and in very large measure to Dr Wippermann for his help in planning the tour and in providing help and guidance throughout.

(M Dinning) A/C H&M E(E)

(R O Smith) D/CWSO

(G Hobbs) H/F i/c BCD

Appendix IIe

B. Brandon Central Depot.

Team: C R V Tandy, Oliver Lucas and Mike Haworth (Project Officer); Bob Jones was marginally involved on the possibility of including a visitor viewing deck , with interpretative material.

B1. The present use and layout of the site was studied in more detail than before and an appraisal made of its function and potential, on the basis of the working party report and the landscape consultant's last report.

B2. An adequate survey at 1/500 and 1/1250 scale was provided, but this had to be up-dated, as several small changes had taken place. The route of a possible ring road suggested by the working party was walked on the ground.

B3. A possible location for a small visitors car park on the Mundford Road. (A 1065) was plotted, and a pedestrian route found through the forest plantation to a suitable point from which a view into the site could be obtained. An elevated viewing platform would, of course, have to be constructed, but this would avoid any direct contact between the public and the operational side of the Depot. Some boundary fencing may be required in places.

B4. The remainder of the visit was largely a data- and opinion-collecting exercise which resulted in fairly good coverage of the problem, but which raised many questions which may require written replies from the work-study D.O.

B5. The opportunity was taken to discuss in more detail the construction of the buildings, with the Estates Officer. Sufficient ideas were given for the local draughtsman to prepare plans of the mess building which will be passed to CRVT for comment.

B6. It is unfortunate that one of the smallest buildings on the site has to be designed and built first, as this will inevitably set a 'house style' for the design of the other buildings, and will be a strong constraint on the layout. It is important that the Mess Building should be sited to give generous room for the largest necessary round-a-bout, and for a screen of trees between it and the road. The team now learns that there is an item in the budget for building part of the ring road (or laying foundations for the whole of it.)

and we are most concerned that no decision should be taken on this until the whole of the site layout is planned.

B7. A critical factor in the road layout is the present location of the stake-production unit. Under previous thinking this unit would be on the outside of the circuit road, while the swing saw which feeds it would be inside. By this the rail track would have to cross the road which would not only be dangerous but would remove a useful stacking provision - the loaded skips themselves which form a mobile stock of sawn timber awaiting the stake production operatives. We feel that the most efficient flow pattern for the depot should not be jeopardised by the retention of one or two small buildings and we strongly recommend that the whole of the stake-production unit be moved into the central zone - fed by the same swing saw - but supplied with a new twin rail track - preferably with a mechanical loader at the saw to enable the skips to move down to the stake unit by gravity. Such a move will inevitably mean the re-siting of the estates saw mill.

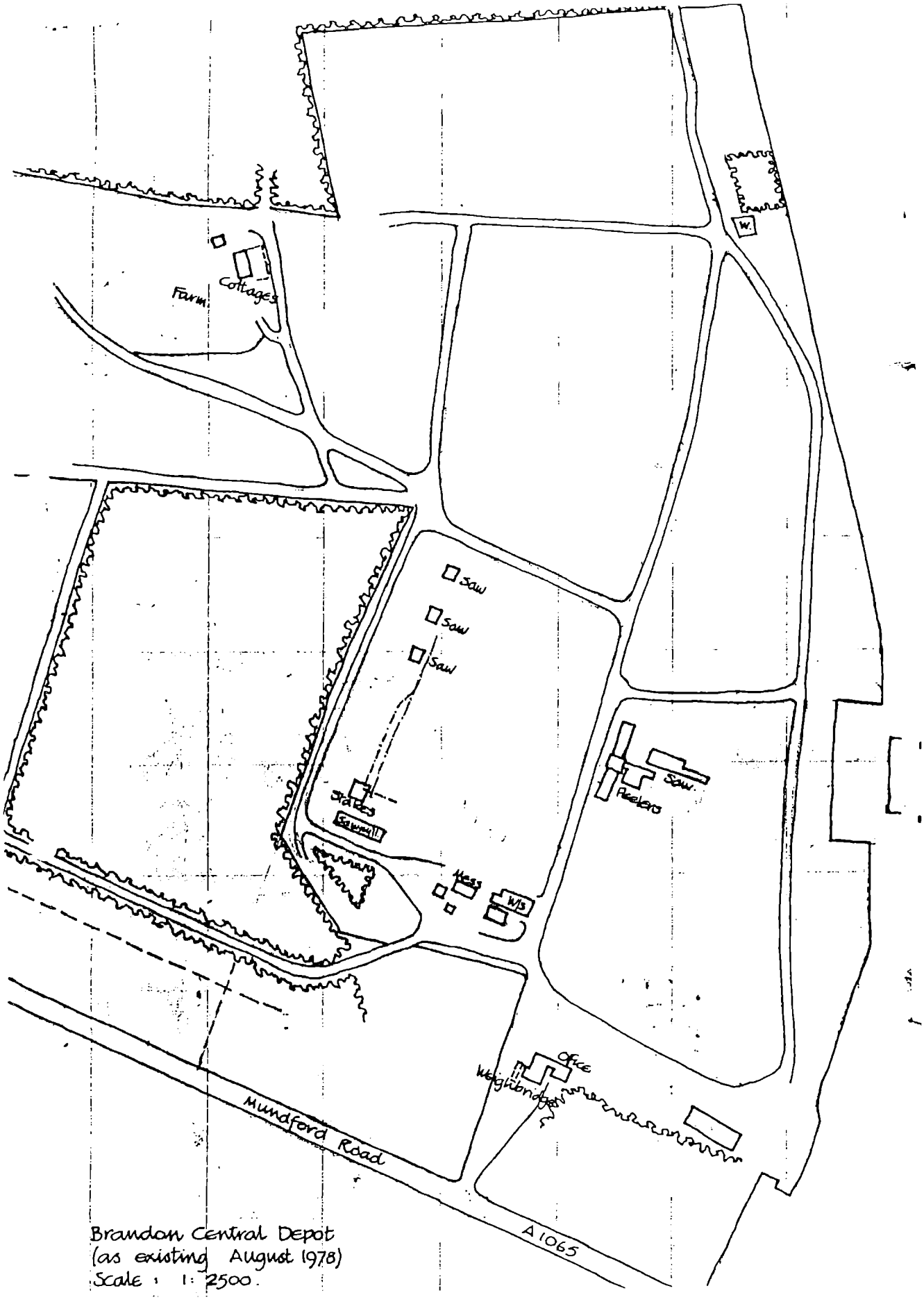
B8. The only other option for this area appears to be the location of the ring road near the boundary of the site where it would pass (with tighter curves) outside the saw mill and stake unit, but cut through the small triangle of trees which has so far been left. An early decision on the choice between these two options is needed.

NB. The area within the road must be sufficient to ensure adequate stacking space at peak periods of the ultimate volume. This will mean felling more trees.

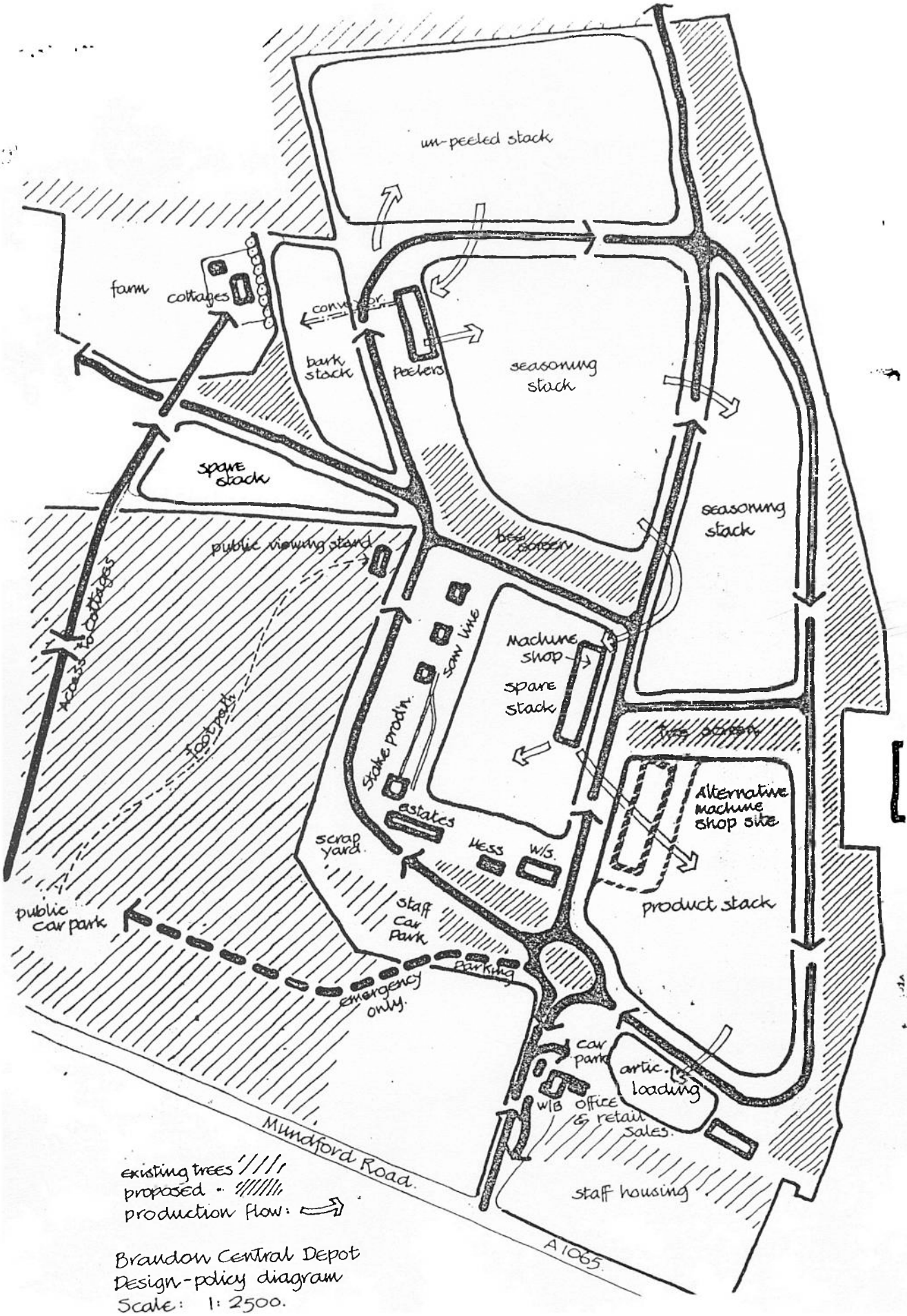
B9. Another option on which a decision will be needed early, is the possibility of siting the main machine building (where timber conversion will take place) either to the North or to the South of the central spine road. This, we feel is a decision which can be made on wholly functional grounds. (see plan)

B10. The work of the team on this project is more than mere landscape design; it is total site planning in order to relate the valuable studies of the working party regarding functional improvements, to the site itself. We have not therefore produced at this stage a sketch design plan for the Depot, but have presented merely a design-policy diagram on which decisions can be taken. A reduced scale version of this diagram is attached to the report.

Cliff Tandy August 1978.



Brandon Central Depot
(as existing August 1978)
Scale : 1:2500.



Brandon Central Depot
Design-policy diagram
Scale: 1:2500.

Appendix IIf

WORK STUDY BRANCH

EAST ENGLAND WORK STUDY TEAM REPORT NO.59 TO CONSERVATOR E(E)

BRANDON CENTRAL DEPOT

PHASE THREE REPORT

Ref: 040/78/11

BRANDON CENTRAL DEPOT

PHASE THREE REPORT

Ref: 040/78/11

INTRODUCTION

1. The depot at Brandon (BCD) has developed since the war in a somewhat piecemeal fashion with the increasing output of the forest. In 1976, Conservator E(E) recognised that most of the buildings required replacement, together with some of the machinery, and he established a Working Party comprising local managers and the Work Study Officer (Appendix XI) to investigate the future availability of wood supplies and to design an up-to-date production system. The findings to date of the Working Party are contained in the Phase One and Phase Two Reports (East England Work Study Team Report Nos.47 and 50) with supplementary information in the Phase Two(a) Report (No.52).

2. This final report of the Working Party describes the detailed requirements of the redevelopment programme to handle up to 70,000 m^3 of roundwood, embracing the principles previously outlined viz: a more efficient layout, contained within a ring road, a unidirectional material flow using single-shift working, increased safety provisions with ergonomic benefits and improved operating conditions.

3. The report is in summary form with detailed programmes, plans and budgets in the appendices.

4. In summary, it is proposed that the redevelopment takes place over the 3 years commencing 1979/80. The following funds in £000, detailed in the appendices, will be required:-

	Buildings and Power	*Machinery*	*Civil Engineering*	*Landscaping*	*Total*
1979/80	104.4	169.2	31.2	1.4	306.2
1980/81	61.4	129.7	26.1	2.3	219.5
1981/82	-	-	22.4	1.0	23.4
Total	165.8	298.9	79.7*	4.7	549.1

* Part of this work (25.5) is chargeable to estates (car parks, working aprons). See Appendix X.

The Phase Two Report estimated the total cost at £433,100. This figure is now revised to £549,100 due to updating of costs and modified requirements, identified as a result of the detailed enquiries of the Working Party.

5. It should be remembered that production has to be maintained during the redevelopment work. Very careful rescheduling of new investments will be necessary to accommodate variations of available funds. (See also paragraph 47 and Appendix IX).

6. Costs dated at 1 March 1979 are, however, based on detailed enquiries within the industry and not on quotations. The firms consulted were Boving & Co Ltd, Dankaerts Ltd and Kunz Engineering Ltd. Because of the complexities of the installations and the inflationary spiral, it was not felt practical to obtain firm quotations in advance of Headquarters approval for the scheme. It is, therefore, intended that this report be used as a basis for tendering.

7. Consultations have been initiated with the Breckland District Council of Norfolk County and no planning problems are foreseen as no change of use is involved.

DEPOT LAYOUT

8. By use of a scale model, a proposed layout, based on the ring road has been produced and the design is now shown at Appendix I.

9. The 17.5 ha available area has been reduced by the buildings, woodland, roads and other installations as detailed in Appendix I in order to calculate the available timber working areas.

10. With power supplied by underground cables, all stacking can be accommodated within the ring road leaving an area of 0.8 ha by the peelers, outside the road, for emergency stacking and releasing 0.3 ha by the railway for planting. A float of 0.3 ha is also declared.

11. An area of some 3.0 ha lies to the north-east, currently used for bark dumping and wastewood disposal and this could be used for emergency stacking, especially during reconstruction work.

CIVIL ENGINEERING

12. The required road system is shown at Appendix I. Of the ring road proposed, that part requiring construction is 1.1 km.

13. Details of the work required are tabulated with detailed costs in Appendix II which total £79,700. The flow diagram (Appendix IX) indicates the timing of roads, working aprons and car parks in conjunction with machine installation and building.

14. Pending construction of the final part of the ring road from electricity pole 13a to point (B), vehicles will temporarily progress to the peelers via the low specification spine and cross-link roads which are not part of the permanent network.

15. For some years, there has been an annual programme of resurfacing in order to create a cleaner yard surface and reduce dust blowing. The Civil Engineering programmes (Appendix II) show that this item will be continued with an annual programme of 3,600 m^2 (= 0.36 ha). The intention is to surface the pitwood and woodwool stacking areas which total 2.2 ha + 1.3 ha = 3.5 ha (of which 1.0 ha is already shown on Appendix I as hard standing). Thus, surfacing work should be complete in $\frac{3.5 - 1.0}{0.36}$ = 7 years.

16. The pre-peel and seasoning areas will be surfaced only where permanent mud presents problems.

POWER SUPPLY

17. As output has increased over the years and petrol-driven machines have been improved with electric motors, electricity demand in the depot has risen. With the new requirements (see Appendix III) the main supply needs upgrading to take these increased loads. In addition, all cabling within the yard will be underground, being justified on the grounds of long term flexibility of yard operation and safety, with landscaping benefits. The Electricity Board have also made provision for a new domestic line to the office and houses, separate from the main depot.

18. All these works have been embodied in three quotations (A, B and C) from the Eastern Electricity Board which total £22,150 and will be borne by Estate accounts. These are broad budget prices and are subject to precise quotation. The cost of internal wiring at each installation is the Forestry Commission's responsibility and has been budgeted against the relevant machinery activity. At Phase Two the need for major works by the Electricity Board on the main supply feeds had not been identified.

19. The Electricity Board have stated that periods of up to 31 weeks will be required from the acceptance of quotations, before work can begin (Appendix IX reflects these delays).

20. Further consultations with the Board are in hand to identify any technical details not yet brought to light which could delay the programmes.

PEELER UNIT AND BARK BAYS

21. The installations are sited as per Appendix I and will comprise the machinery as detailed in Appendix IV at a total cost (excluding Civil Engineering Work and buildings - see relevant appendices) of £164,200. One of the existing peelers will be reconditioned and resited with the new one, the other overdue for replacement, will be disposed of. The installation is planned to take place during the latter half of 1979/80.

22. The unit will comprise two peelers with log decks sited in parallel feeding a central barkmill, from where bark will be belt-conveyed to maturing bays. Most bark will be milled, as markets are good for horticultural uses, animal husbandry and equestrian sports; unmilled bark is also marketed for use on horse gallops. The peeled poles will be collected from the outfeed bins by front end loader and taken to the seasoning area.

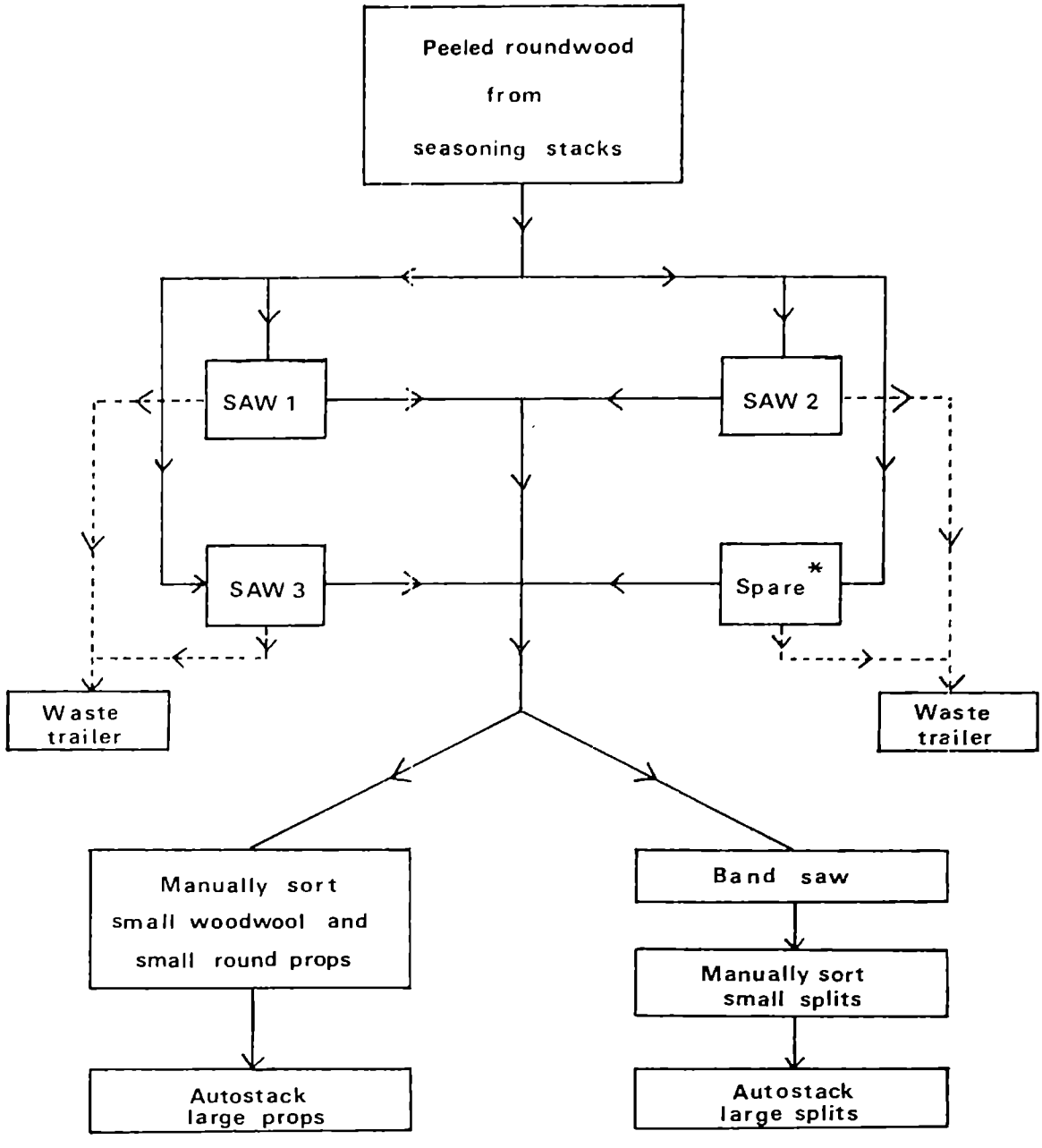
23. There will be one operator per peeler working on a covered catwalk feeding the conveyor with poles from the log deck. A third man will supervise the barkmill and general rubbish disposal assisting both peelers where necessary. All three operators will have the facility to shut down peeling operations by press-button in the event of an accident.

SAWLINE UNIT

24. The saws and related equipment will be sited as per Appendix I and comprise the machinery detailed at Appendix V at a total cost (excluding Civil Engineering Work and buildings - see relevant appendices) of £124,700. The installation is planned to take place during 1980/81.

25. With the exception of the swing saws, the existing saws will not be useable in the new set-up; they are already overdue for replacement.

26. Diagrammatically, the new system is designed thus:-



* In the event of further output being required, the spare saw could be put in.

27. In operation single-stage, power-operated decks, with manual pull onto the sawfeeds will supply three crosscut saws with round, seasoned timber to be primarily converted into pitwood (round props or split by band and woodwool billets, with waste lengths going mainly for firewood. Products will be sorted manually for short lengths with autostacking for larger pitwood, both going into pallets, which are of local construction, adapted to cater for varying dimensions. These will be removed to stock by fork-lift truck.

28. A system for steel or polyester strapping the converted pitwood is being investigated in conjunction with the NCB. The potential savings lie in handling and storage, particularly at the collieries. The planned sorting area in the sawshed could accommodate compressed airlines to operate the hand tools used for seal-crimping but no cost allowance has been made for this system, since the NCB lacks a definite commitment to strapping at present.

29. The three swing saws (see Appendix I) are to remain at least for the present; their location does not interfere with the new depot provisions. One will continue to cut small diameter, unpeeled poles for stake production, which is a separate roundwood intake in addition to the BCD 70,000 m³ target (see East England Work Study Team Report No.56 - in the course of preparation). The other two saws, usually used for converting Cambio poles, will be retained during the reconstruction.

30. As per the recommendations of the Phase One Report, research into the potential for chipping wastewood and reject poles will continue. For the present, such material is sold for burning to charcoal just off the depot site.

BUILDINGS

31. The industrial mess hut, workshop and office have been budgeted replacements for many years, but have been deferred. These will be required, however, whether or not Phase Three recommendations are implemented.

32. Work has already commenced on the industrial mess hut, sited alongside the old (see Appendix I). Detailed consultations with F.C. Design Branch and the workforce were undertaken prior to tender. The total tendered cost is £19,500.

33. The replacement workshop design is shown at Appendix VI and will be sited as per Appendix I, where it will incorporate all the small existing sheds. This work should be undertaken in 1979/80 at a total cost of £38,500. Consultation with the Chief Engineer will follow the issue of this report as part of the planning procedure.

34. The new workshop includes a chainsaw repair workshop, which is not a directly integral part of BCD, servicing saws from the forest. The actual depot workshop is for the servicing of BCD machinery only; all other being dealt with at the main Conservancy mechanical workshop at Santon Downham.

35. The replacement office is also scheduled for 1979/80 - 110 m² of floor space at £150/m² to include all fittings = £16,500 plus £500 for the 6 months hire of temporary toilets = total cost £17,000.

36. The relationship between the existing office site and the proposed new one is shown at Appendix VII. Essentially, the old office, minus the gangers room and toilets, will continue to be used during the reconstruction. The industrial foreman and gangers will temporarily use the first aid room in the mess hut, while 'Portaloo' facilities will be provided for the office staff. The weigh-bridge operator will continue to function in situ, protected from the elements,

until the new office is built around him - full use being made of the annual 14-day depot shutdown.

37. Local cash sales, if developed, will be sited with the stake and rustic stocks at the western end of the woodwool stacking area (see Appendix I).

38. Internal telephone or additional shortwave radio links within the depot have been considered but radio handsets on the existing District network are available and will be used as necessary.

39. Concurrent with the erection of the peelers and barkmill, a peeler shed will be constructed during 1979/80. This will be of cantilever type 20 m x 14 m incorporating a 3 m overhang at each side with a 5 m ground to cantilever clearance to provide all-weather working. At £60/m², to include all internal works, this building will cost £16,800.

40. Similarly, a sawshed 53 m x 20 m = 1060 m² will be constructed in 1980/81 concurrent with the machinery installation. This will have open ends to facilitate loading of the log decks through the gables. Side cladding will be added where necessary for operator comfort. At a unit price of £55/m², to include all internal works, this building will cost £58,300.

LANDSCAPING

41. In consultation with Forest Design Branch, plans for tree planting adjacent to the railway, and within the depot, have been drawn up. The former will be topsoiled in the winter of 1979 and planted in early 1980 with a 50 : 20 : 20 : 10 mixture of Scots pine, larch, birch and alder totalling 1.1 ha. The latter will complete the landscaping work at the end of the project (see Appendix IX) by providing a broken belt of trees, enhancing the view up the depot without impeding loader movement.

42. The existing 1.1 ha woodland of mature Scots pine (see Appendix I) will be regenerated in 1980 with group planting of Scots pine and beech mixtures.

43. Depot landscaping, comprising shrubs and trees, will also be undertaken on completion of Civil Engineering work by the office, mess hut and workshop.

LABOUR SITUATION

44. The present depot industrial staff comprises 41 people (see Appendix VIII). When all works are completed as specified in this plan, this should reduce to 40 including the introduction of an industrial foreman, despite the increase in roundwood throughput. The introduction of strapping (paragraph 28) could be accommodated within that number. As 20% of the workforce are over 60 years of age, the reduction of one man and future reductions will be accommodated by natural wastage.

45. The improved working conditions and ancilliary facilities should enhance the prospects for long term recruitment.

FUTURE WORK STUDY INVOLVEMENT

46. Work Study Branch will be commissioned by Conservator E(E) to monitor the working up trials of the development, and thereafter to carry out both method and time studies to perfect the methods of working and introduce incentive schemes.

PRIORITIES

47. In the event of funds not being made available as required (see Appendices IX and X), the following priority list will be invoked.

48. Buildings

Both workshop and office are well overdue for replacement, with the former taking precedence. The shed construction for both peeler and sawline units must be carried out in conjunction with the machinery installation.

49. Machinery

The peeler unit will be the first major mechanical item to be installed. The old electric Cambio building will be demolished prior to the building of the new sawmill in the following year. The revised electrical system will have to be completed before either peeler unit or sawmill can be brought into use.

ACKNOWLEDGEMENTS

50. In conclusion, the author wishes to thank all the members of the BCD Working Party for their various contributions and for the overall help from E(E) Conservancy staff.

M N HAWORTH
East England Work Study Team
March 1979

DEPOT LAYOUT

(a) To check the feasibility of all necessary 'working' areas having enough space, the following were deducted from the BCD total of 17.5 ha (WPO figure):-

New planting	1.1
Mature Scots pine woodland (by office)	1.1
Office, car/lorry park, weighbridge	0.6
F.C. houses and field	1.0
Mess hut, workshop car park, vehicle compound	0.7
Stakeline and swing saws	0.7
Ring (1,688 m) and spine (535 m) roads = 2,223 m x 6.4 m =	1.4
Area between ring road and farm road	0.1
New sawshed	0.4
New peeler unit	0.3
Bark bays and loading area	0.2
Mid-depot screen	0.2
	7.8 ha

(b) Thus, 17.5 − 7.8 = 9.7 ha exists to accommodate the 'working' areas.

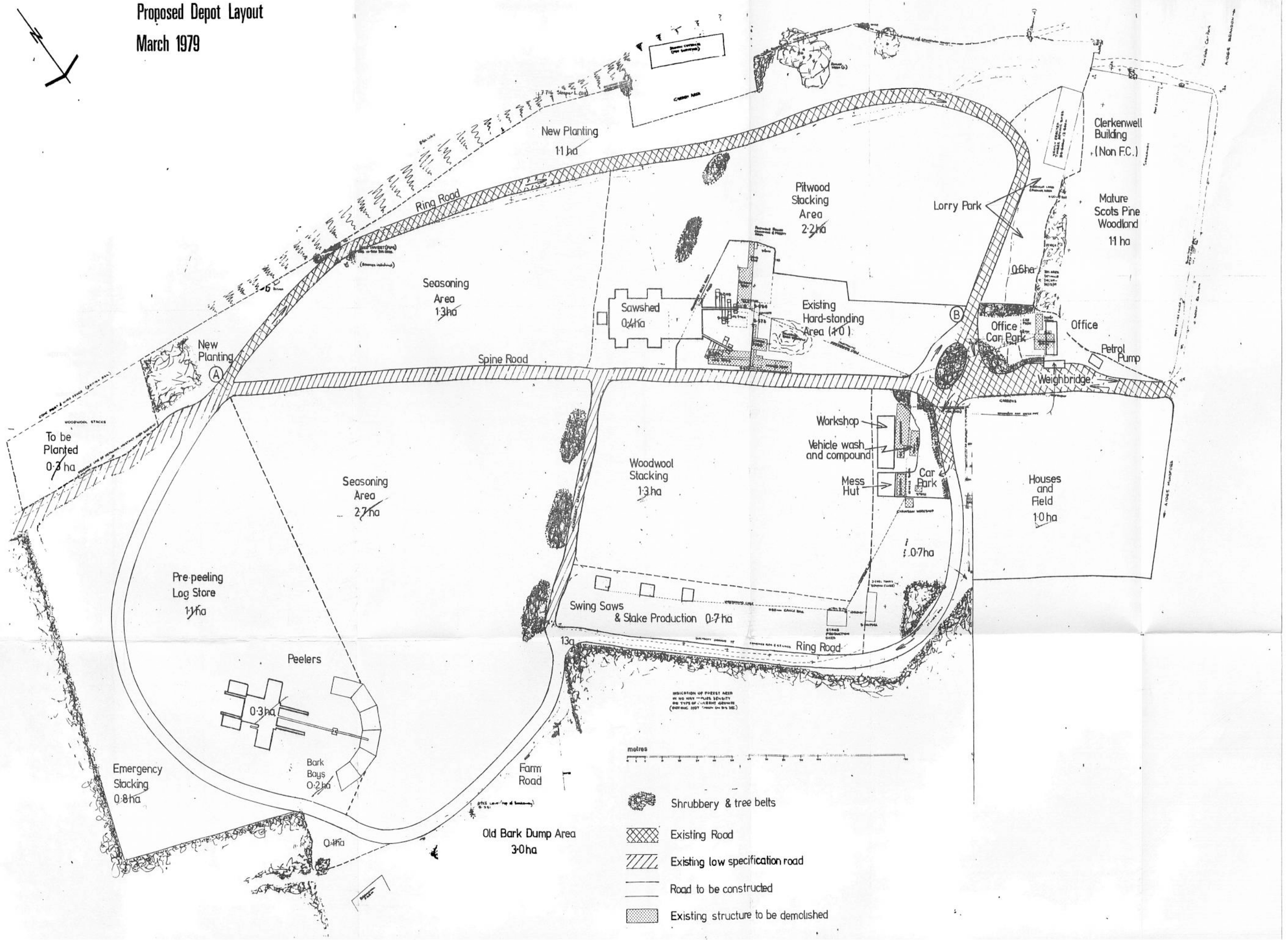
		Required	Allowed
(c) Pre-peeling log store -	a maximum of 14 weeks supply = 5,000 m^3 at 0.4 m^3/m^2 =	1.3	1.1
Post-peeling seasoning -	35 weeks supply 20,000 m^3 at 0.5 m^3/m^2 =	4.0	4.0
Stacking finished props and splits (≡ Pitwood stacking) =		2.0	2.2
Stacking woodwool (0.5 and 2.0 m) =		1.0	1.3
		8.3 ha	8.6 ha
Emergency stacking area outside the road			0.8
Released for new planting			0.3
			9.7

Note: The boundaries between these areas are flexible to a degree and no problems are foreseen.

BRANDON CENTRAL DEPOT E(E)

Proposed Depot Layout

March 1979



CIVIL ENGINEERING

(a) The following costs (3/79) have been used in compiling budgets:-

(i)	Asphalt (tarmac) for ring road, bark bays and machinery aprons:	
	Grade and lay stone sub-structure	£0.86
	Poor ground and miscellaneous allowances	£0.14
	Contract tarmac laying	£3.42
		£4.42/m²
(ii)	Bituminous macadam ('Bitmac') - slightly less hard-wearing than (i) e.g. spine road	£3.50/m²
(iii)	Concrete - for workshop apron and vehicle wash, being unsusceptible to oils	£5.00/m²
(iv)	Spray and chip, following grading e.g. surfacing of stacking areas to keep timber clean and reduce dust	£2.00/m²

(b) In accordance with the flow diagram (Appendix IX), the following road programmes are budgeted (see Appendix X).

1979/80

(i)	616 m of ring road from point (A) to sub-station 13a x 6.4 m = 3,942 m² at £4.42/m²	£17,430
(ii)	Office car park (12 cars) 180 m² at £4.42/m²	£800
(iii)	Bark bay apron 1,300 m² at £4.42/m²	£5,750
(iv)	Depot surfacing 3,600 m² at £2.00/m²	£7,200
		£31,180

1980/81

(i)	Peeler apron 800 m² at £4.42/m²	£3,540
	800 m² at £3.50/m²	£2,800
(ii)	Sawline apron 1,000 m² at £4.42/m²	£4,420
	1,000 m² at £3.50/m²	£3,500
(iii)	Workshop apron and vehicle compound 400 m² at £5.00/m²	£2,000
(iv)	Car park by mess hut (40 cars) 600 m² at £4.42/m²	£2,650
(v)	Depot surfacing 3,600 m² at £2/m²	£7,200
		£26,110

1981/82

(i)	Complete ring road from 13a to point (B) 484 m x 6.4 m = 3,097 m² at £4.42/m²	£13,690
(ii)	Roundabout, signs etc	£1,500
(iii)	Depot surfacing 3,600 m² at £2/m²	£7,200
		£22,390

POWER SUPPLY

(a) Estimate A

To supply and install the following:-

(i) Supply position, main switchboard incorporating moulded case circuit breakers (MCCB) with three outgoing ways.

(ii) Location A (Peeler unit) sub-distribution board with MCCB - 210 hp plus 14 kW lighting and heating.

(iii) Location B (Sawline unit) sub-distribution board with MCCB - 170 hp plus 14 kW lighting and heating.

(iv) Location E (Swing saws) sub-distribution board with MCCB - 30 hp plus 10 kW space heating.

(v) Location C (Mess room) - small switchgear fed from Location E - 14 kW space heating and cooking.

(vi) Location D (Workshop) - small switchgear fed from Location E - 25 hp plus 11 kW lighting and space heating.

(vii) Underground cables, armoured and aluminium-cored, as necessary, to feed each location but terminating at sub-distribution points.

Total cost £18,000

Note: Wiring to, and connection of, peeler and sawline machinery, plus the heating and lighting, have not been allowed for at these locations by the Board.
The estimated cost of these is £5,000 for each unit, paid out of VME accounts.

(b) Estimate B

To remove the 11,000 volt overhead line from the high voltage pole 13a to the high level transformer 17a plus the erection of a new overground line to the new office and F.C. houses from the Brandon - Mundford road.

£2,200

Cost ~~£1,800~~

Failure to agree overground wayleaves will result in an extra cost to sink the cables of £8,000 which has not been budgeted at this stage.

(c) Estimate C

To provide a 3-phase 240/415 volt 4-wire supply to an estimated 450 kva for the whole depot, to a new meter position by pole 13a, adjoining the plantation.

Cost £1,450

The new sub-station can be provided by the Board at a standard cost of £900 and will also house power factor correction equipment making a total of

£2,350

The total cost of the revised electricity supply provisions for the depot is, therefore

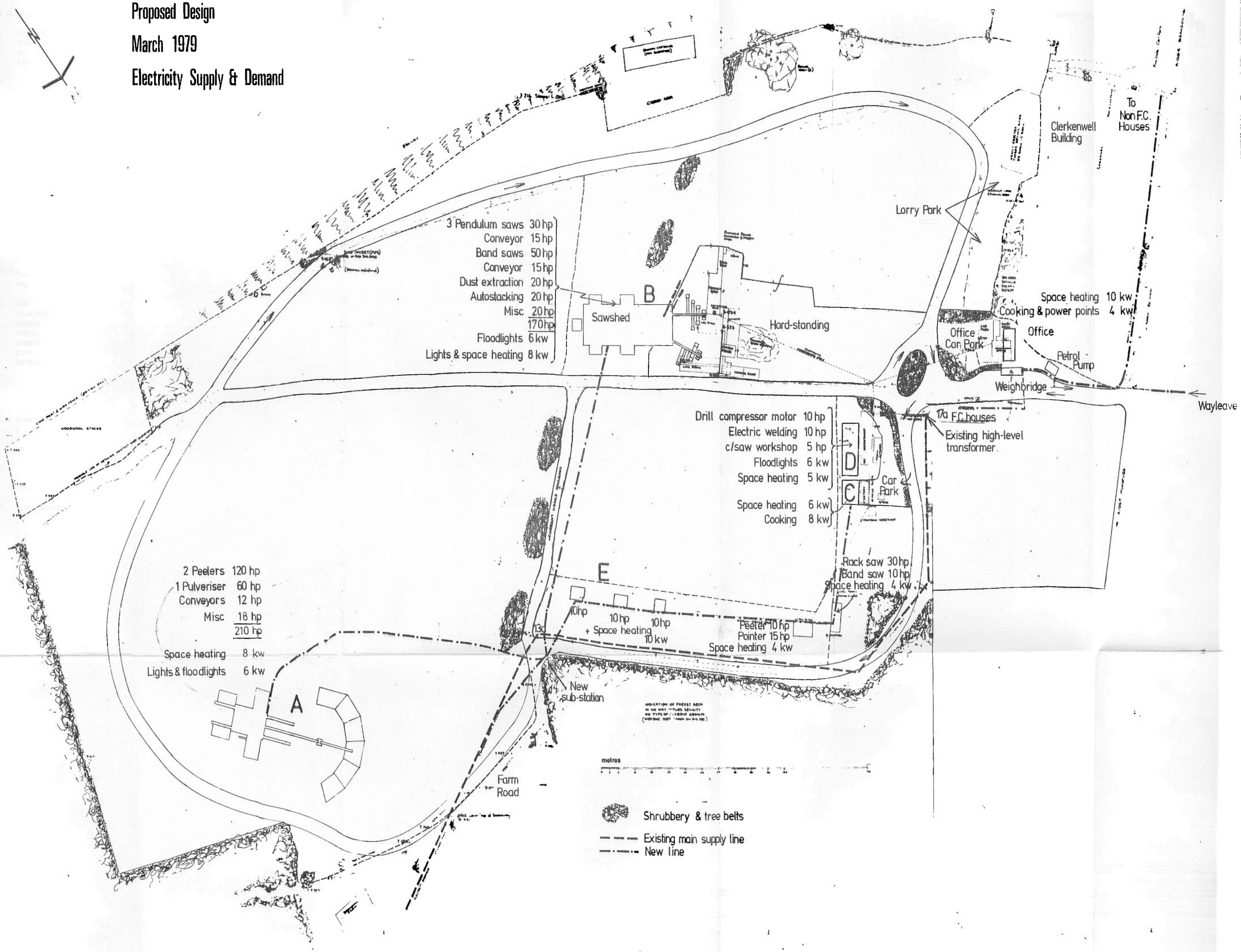
£18,000	Estimate A
£1,800	Estimate B
£1,450	Estimate C
£900	Estimate C
£22,150	(See Appendix X Estate Account)

BRANDON CENTRAL DEPOT

Proposed Design

March 1979

Electricity Supply & Demand



PEELER UNIT AND BARK BAYS

(a) The following machinery is specified (see Appendix I layout).

(i)	One new Cambio 71-45 CA debarker	£35,000
	Existing Cambio 70-35 AA debarker, reconditioned	£4,000
	Both peelers to work at net feed speeds of not less than 35 m/minute.	
(ii)	Two infeed decks (12 m x 8 m) of stout, simple construction - sufficiently high (2.5 m) to allow access beneath for cleaning if necessary. The decks will be single stage of 20 tonne minimum capacity with a horizontal 'find' feed deck and four drive chains, two of which on one side will be independently controlled with a reverse facility to straighten pole alignment. Variable speeds are not necessary. For each log deck, full decking will be required on the first 6.5 m with an open skeleton framework for the other 5.5 m enabling rubbish to fall through onto steeply-inclined steel chutes, discharging onto a tined conveyor feeding a trailer, thence to the dump	£20,000 £15,000
(iii)	Duplicated buttons controlling a single revolution clutch conveyor to the peelers with reverse/reject facility	£10,000
(iv)	Automatic pneumatic kick-offs will be provided, activated by photo-electric cells, to direct the peeled logs into the collecting bins	£25,000
(v)	Two outfeed concrete-floored collecting bins of timber bearer and steel bolster-pin construction	£8,000
(vi)	One 36" barkmill of cutting action of minimum 4 m^3/hour capacity with controlled infeed to prevent clogging e.g. hopper with revolving shutter or paddle cutter volume regulator. The conveyor infeed will incorporate a magnet and metal detector with automatic cut-out. A by-pass chute is also required for unmilled bark in case of barkmill breakdown or for marketing reasons	£25,000
(vii)	A 50 m trenched conveyor to a hopper with a moving outfeed at the end of a pivoted 20 m belt to convey bark from the mill to the bays	£6,000
(viii)	Five bark bays of 330 m^3 capacity for milled bark plus a 450 m^3 bay for unmilled bark, constructed of 8" RSJ steel girders, concrete-footed using split timber or railway sleeper walling	£4,000
(ix)	Installation charges	£10,000
(x)	Fittings and incidentals	£5,000
(xi)	Dismantling old Cambio No.2	£200

Total cost of Peelers and Bark unit	£167,200
Less sale of old Cambio No.2	£2,000
" " " " Barkmill	£500
" " " " Buildings, decks, misc.ironworks	£500
Therefore, total net cost	£164,200

All the above to conform with the requirements of the Health and Safety at Work and Factories Acts.

Note: Quotations where previously obtained, have been updated as far as possible.

(b) Bark Bay Calculations

Annual bark production = 10% of 70,000 m^3 = 7,000 m^3
= 140 m^3/working week

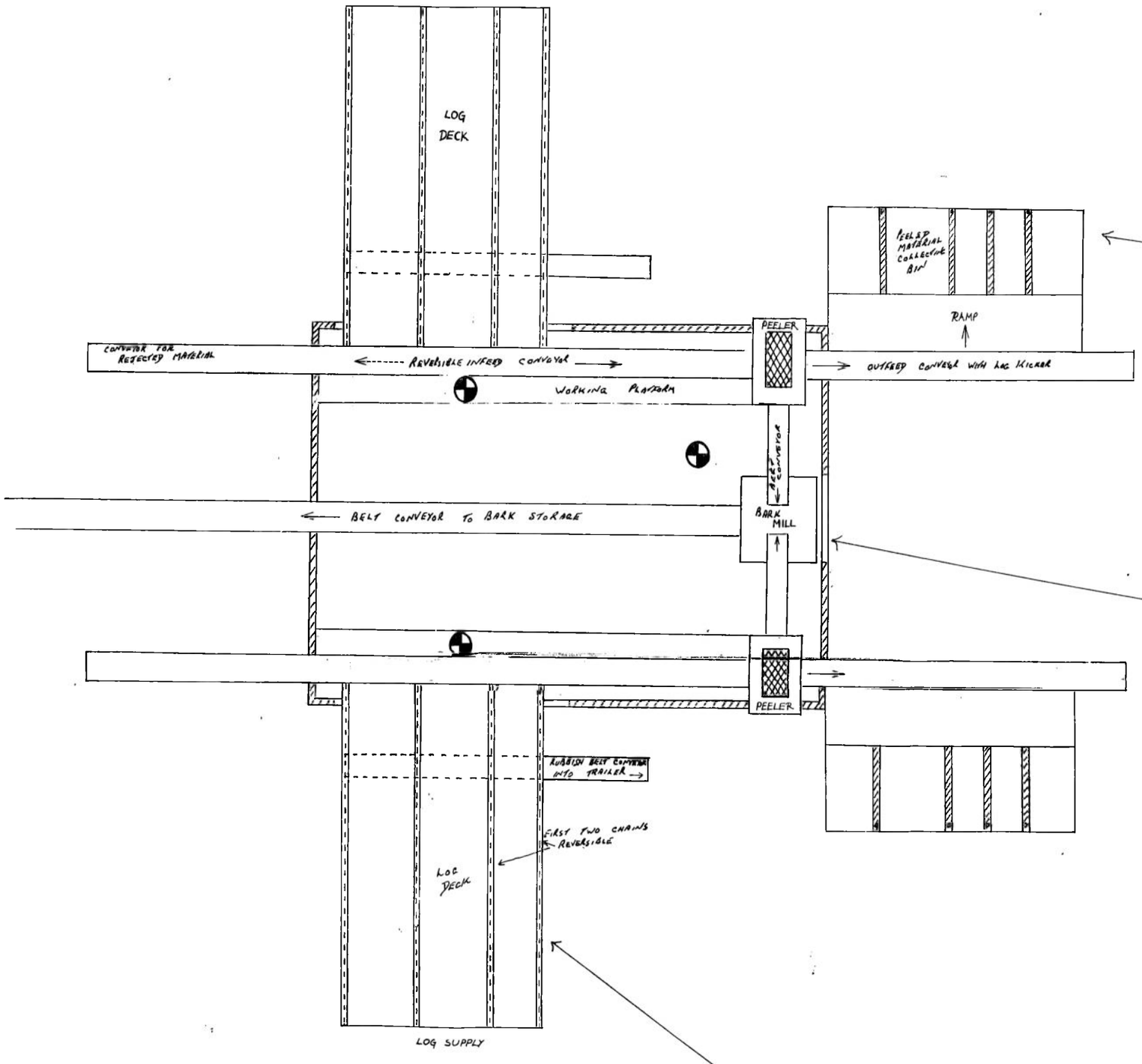
6 weeks is the minimum maturing period for milled bark, therefore,
6 weeks production = 6 x 140 = 840 m^3.

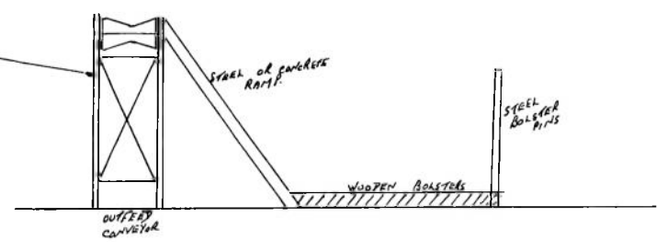
The arrangement will work with five bays, as follows:-

Bay No.	1	2	3	4	5
Fill in Week Nos.	1 - 2	3 - 4	5 - 6	7 - 8	9 - 10
Therefore, empty in Week Nos.	9 - 10	11 - 12	13 - 14	15 - 16	17 - 18

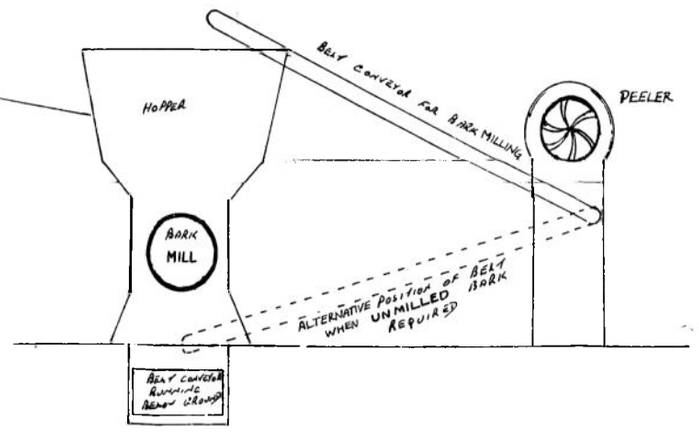
Therefore, once the system is running, in 10 weeks 5 x 300 m^3 = 1,500 m^3 will have been produced and sold which in 50 weeks = 5 x 1,500 m^3 = 7,500 m^3, thereby achieving the target of 7,000 m^3.

The bay design is based on 3 m high x 10 m side walls x 9 m front wall x 13 m open back, giving a retained volume of $3 \times \frac{9 + 13}{2} \times 10 = 330\ m^3$. The cone effect of bark deposition will be spread to prevent bark from being blown away by the wind, after a day's production.



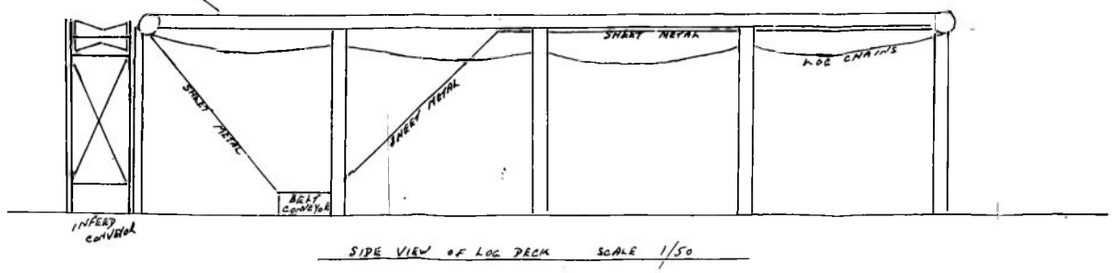


SIDE VIEW OF COLLECTING BIN SCALE 1/50



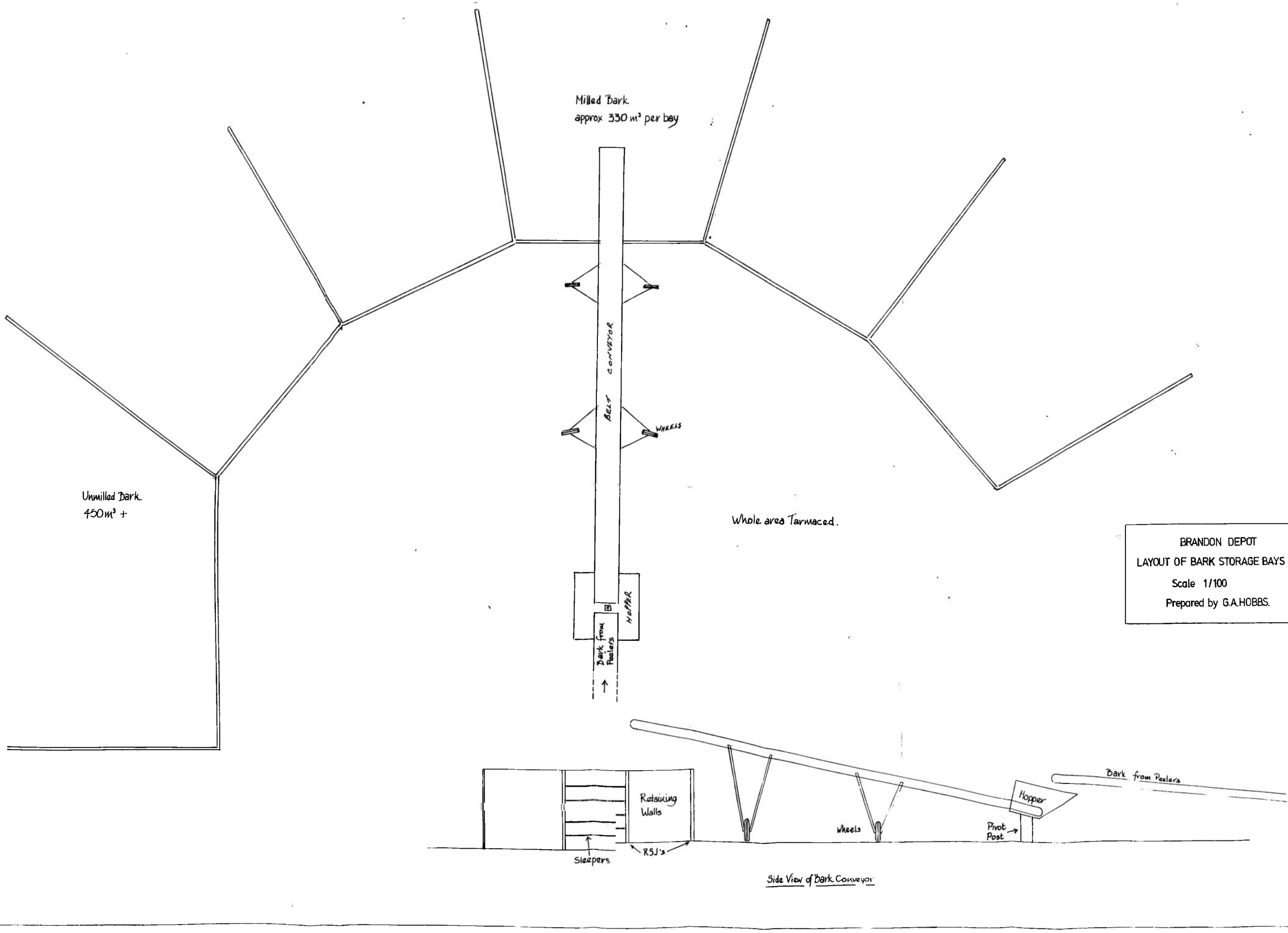
SIDE VIEW OF BARK MILL & PEELER SCALE 1/50

OF MILL



SIDE VIEW OF LOG DECK SCALE 1/50

BRANDON DEPOT
A SUITABLE DESIGN FOR THE PEELING UNIT
SCALE 1/100
OPERATOR
PREPARED BY G.R HOBBS


Milled Bark
approx 330 m³ per bay
CONVEYOR BELT
WHEELS
HOPPER
Bark from Peelers
Unmilled Bark
450m³ +
Whole area Tarmaced.
BRANDON DEPOT
LAYOUT OF BARK STORAGE BAYS
Scale 1/100
Prepared by G.A.HOBBS.
Retaining Walls
Sleepers
RSJ's
Wheels
Pivot Post
Hopper
Bark from Peelers
Side View of Bark Conveyor

SAWLINE UNIT

(a) The cutting requirements for the new sawline are illustrated by reference to the Pitwood and Woodwool production planned for Brandon Depot 1.3.79 - 29.2.80 which is recorded below:-

	PROPS		*SPLITS*		*TOTAL*	
Top Diameter ub (mm)	*Volume (m^3)*	*Length run (m)*	*Volume (m^3)*	*Length run (m)*	*Volume (m^3)*	*Length run (m)*
80	500	83,800	-	-	500	83,800
90	450	60,700	-	-	450	60,700
100	750	80,500	1,000	214,600	1,750	295,100
110	600	54,000	450	81,000	1,050	135,000
120	200	15,300	400	61,300	600	76,600
130	1,000	66,000	2,300	303,400	3,300	369,400
140	1,200	64,200	1,400	160,700	2,600	224,900
80 - 140 mm	4,700	424,500	5,550	821,000	10,250	1,245,500
150	1,900	89,500	3,600	339,600	5,500	429,100
160	500	21,000	1,800	150,900	2,300	171,900
170	700	26,000	500	37,500	1,200	63,500
180	1,000	34,000	2,800	188,900	3,800	222,900
150 - 180 mm	4,100	170,500	8,700	716,900	12,800	887,400
190	200	6,000	2,800	170,800	3,000	176,800
200	1,000	28,000	2,200	122,000	3,200	150,000
190 - 200 mm	1,200	34,000	5,000	292,800	6,200	326,800
GRAND TOTAL	10,000	629,000	19,250	1,830,700	29,250	2,459,700
Percentages	34%	25%	66%	75%	100%	100%

Thus, in the year there must be crosscut (excluding waste ends) 629,000 lineal metres of peeled wood to produce round props and also 915,350 lineal metres of round props which shall be split to give 1,830,700 lineal metres of splits. The total passing under the crosscut saws will thus be 1,544,350 lineal metres plus waste.

(b) Woodwool Production

The specifications are 12 to 26 cm top diameter by 0.5 m or 2.0 m. Volumes per piece average 0.0088 m^3 (0.5 metre) and 0.035 m^3 (2 metres) at 57 lineal metres/m^3. Thus, 10,000 m^3 represents a running length of 570,000 metres plus waste, to be crosscut.

WORKSHOP

(a) A vehicle wash including ramps and drains for steam cleaning is included externally on the west side, sited to keep mud and debris clear of the apron.

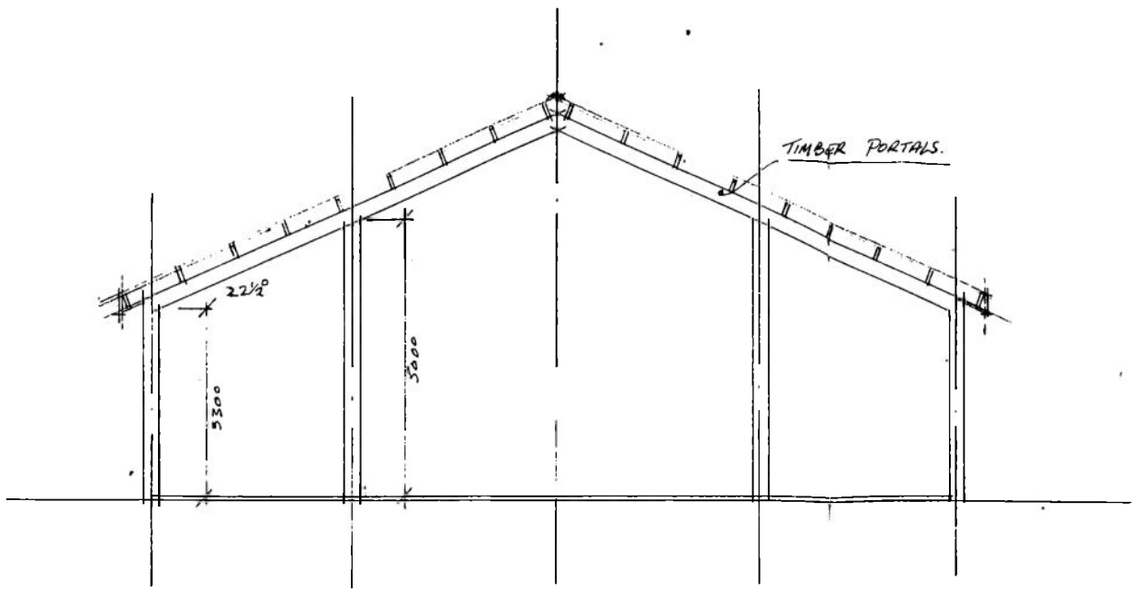
(b) The soakaway drain and sludge trap will require laying before concrete surfacing - which minimises breakdown by petrol and oil.

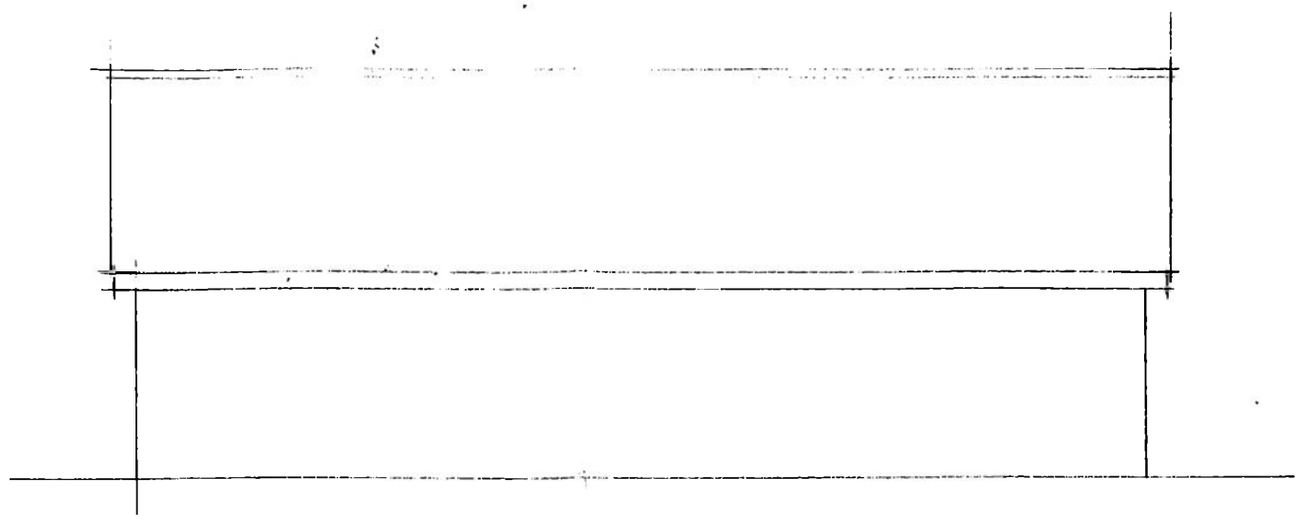
(c) The vehicle wash and open-sided tractor sheds will be contained within a security fence; this yard being floodlit.

(d) A single vehicle inspection pit will be offset in the floor, adjacent to the entrance.

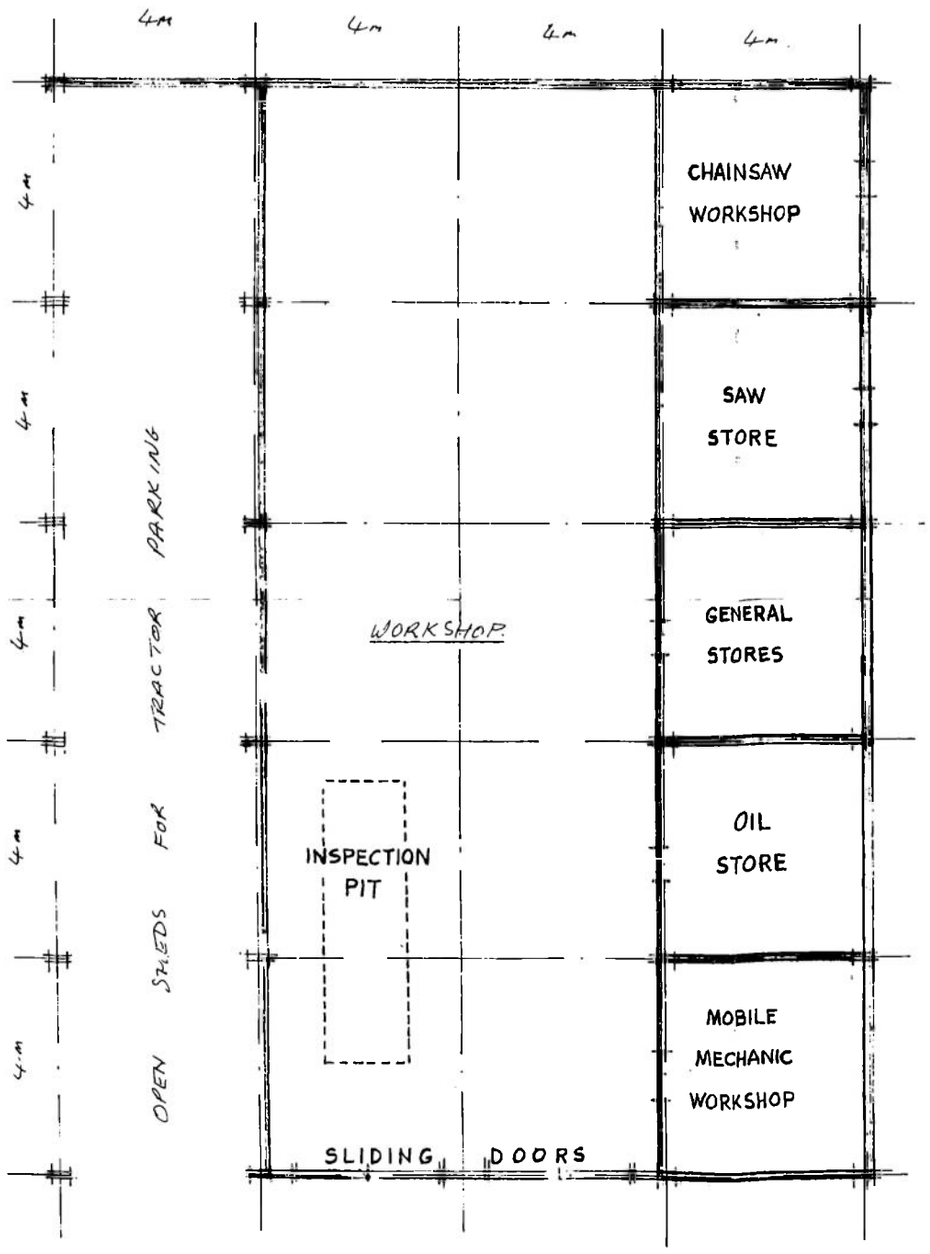
(e) Ventilation will be provided by gable-end louvres and/or extractor fan. Costs are estimated as follows:-

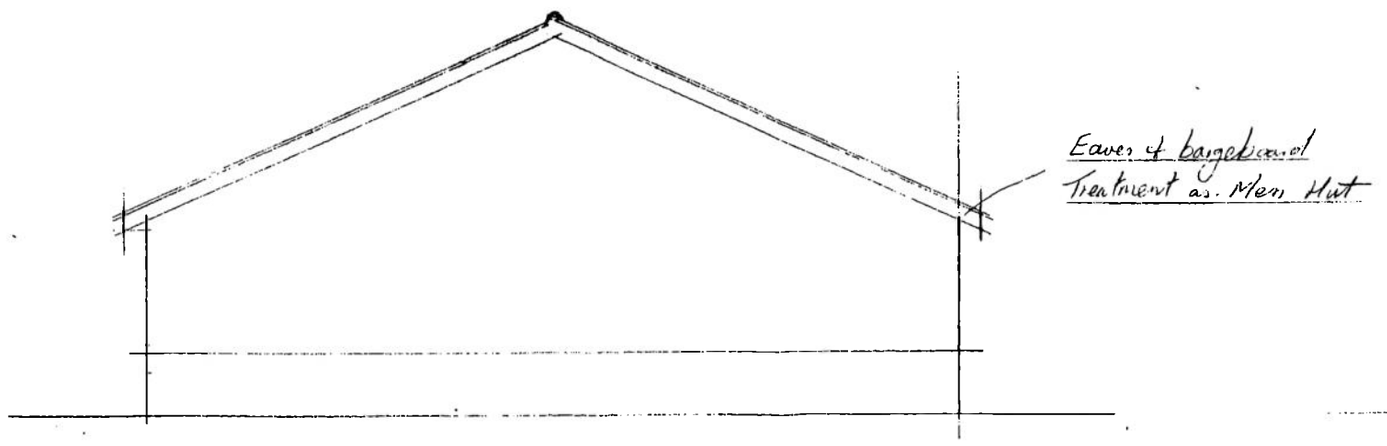
(i)	Building 20 m x 16 m = 320 m^2 at £100/m^2 (including wooden floored small workshops and all fittings)	£32,000
(ii)	Internal mechanical equipment e.g. air compressor	£1,300
(iii)	Vehicle wash	£2,500
(iv)	Fencing around the yard	£1,000
(v)	Floodlighting	£1,500
(vi)	Demolish old workshop	£200
	TOTAL COST	£38,500

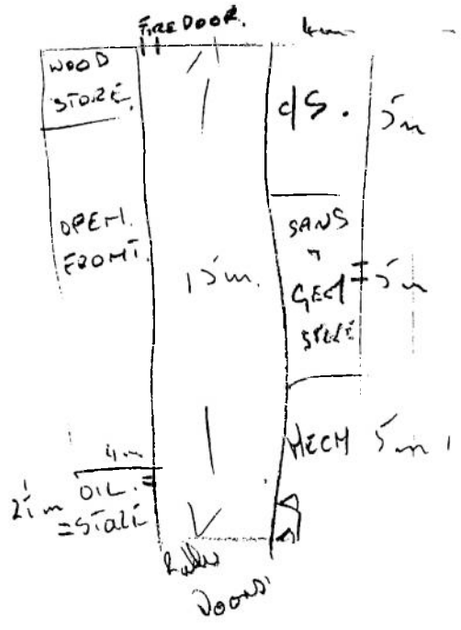


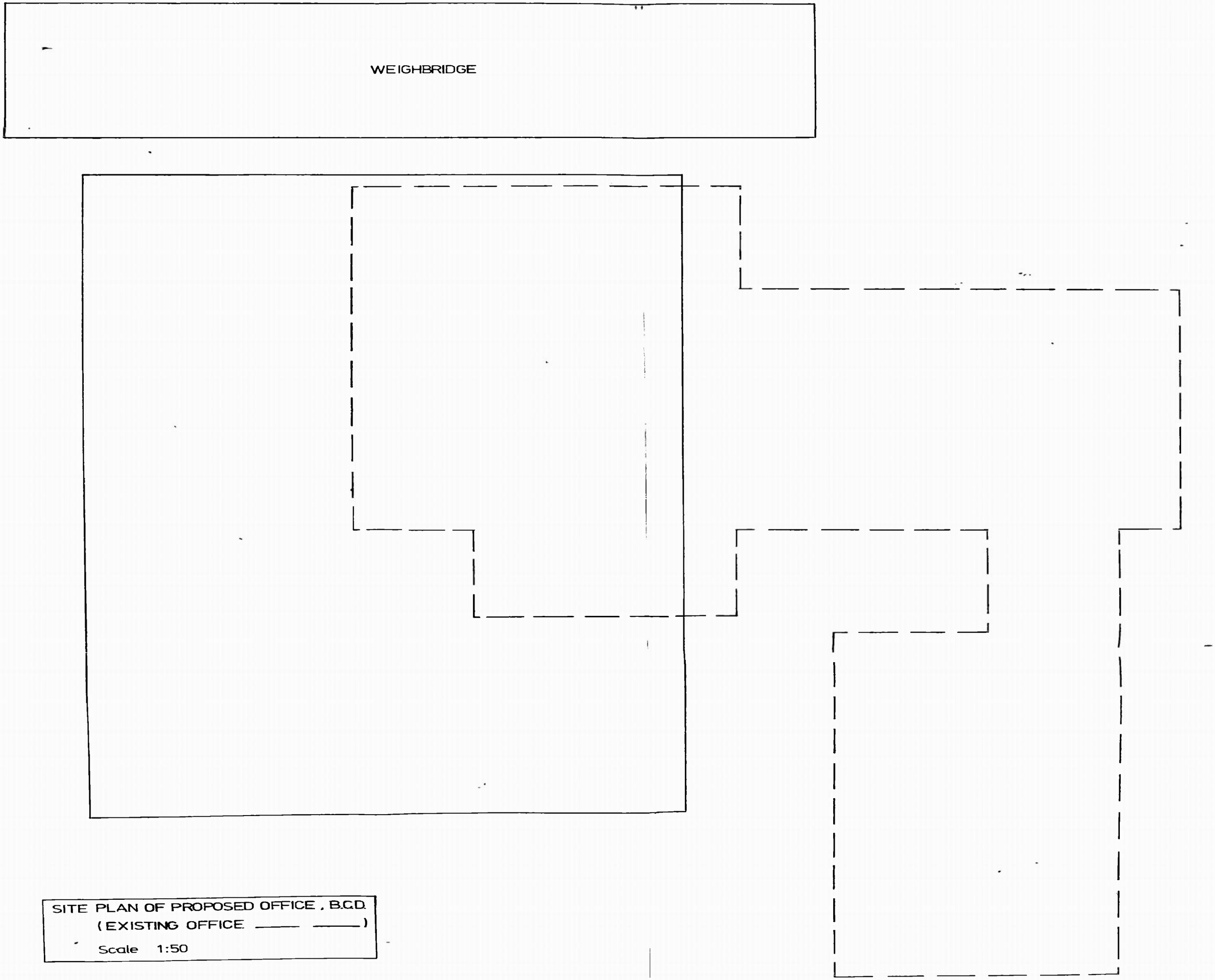


B.C.D. WORKSHOP.









SITE PLAN OF PROPOSED OFFICE , B.C.D.
(EXISTING OFFICE ——— ———)
Scale 1:50

LABOUR SITUATION

(a) Existing Depot Industrial Staff:-

3 Gangers
2 Clerks
1 Weighbridge operator
1 Crane driver
1 Crane mate
1 Lorry driver (spare crane driver, loads woodwool)
3 Front end loader operators (includes bark dump work)
1 Fork-lift driver
1 Water tanker driver (also operates loaders)
3 Tractor drivers (5 tractors)
6 'Pendulum' and Band saw gang (2 saws)
7 Swing saw gang (2 saws)
1 ½ metre woodwool man
3 Cambio peeler operators
5 Stake and rustic gang (Cole peeler, swing saw, 3 liner saws)
2 Odd job men (small orders, building repairs and maintenance, pallet repairs and training)

41

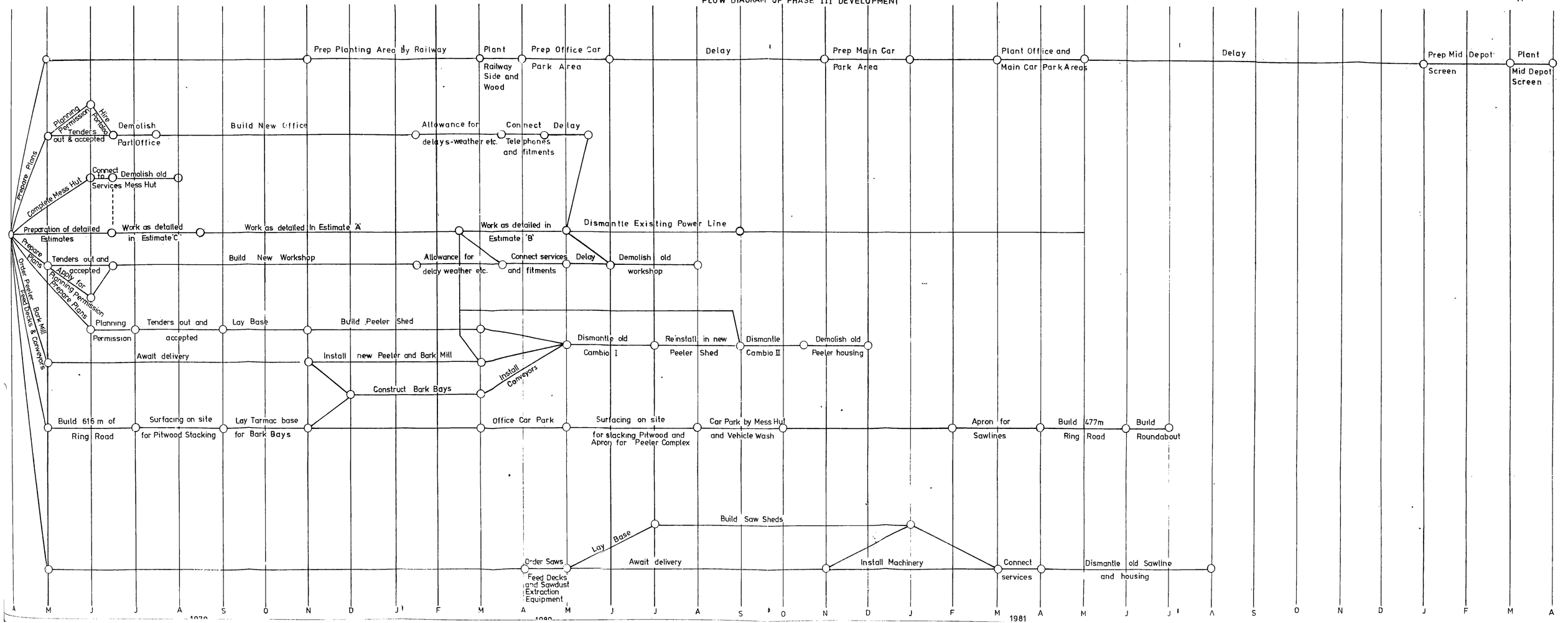
(b) Proposed deployment:-

1 Industrial foreman
3 Gangers
3 Clerks (1 spare weighbridge operator)
1 Weighbridge operator
1 Crane driver
1 Crane mate
1 Lorry driver
3 Front end loader operators
1 Fork-lift driver
2 Cambio peeler operators
1 'Springer' to both peelers, barkmill and rubbish supervisor
7 Sawyers and feeders
6 Sorters on sawlines
2 Tractor drivers (peeler and sawshed waste)
5 Stake production
2 Odd job men

40

Appendix IX

FLOW DIAGRAM OF PHASE III DEVELOPMENT



Insert 11ff

APPENDIX X

BUDGETS

Account Head and Item	79/80	80/81	81/82
(a) ESTATE			
Industrial mess hut	13.0		
Workshop	36.4	2.1	
Office	16.0	1.0	
Peeler shed	16.8		
Sawline shed		58.3	
Electricity A	18.0		
B	1.8		
C	2.4		
Peeler apron		6.3	
Bark bay apron	5.8		
Sawshed apron		7.9	
Car park by mess hut		2.7	
Workshop apron and vehicle wash		2.0	
Office car park	0.8		
TOTAL ESTATE	111.0	80.3	
(b) VME			
Peeling unit and bark bays	164.2		
Sawline unit		124.7	
Internal wiring at each	5.0	5.0	
TOTAL VME	169.2	129.7	
(c) ROADS			
Ring road 616 m	17.4		
Ring road 484 m			13.7
Roundabout, signs etc			1.5
Surfacing	7.2	7.2	7.2
TOTAL ROADS	24.6	7.2	22.4
(d) FOREST			
Prepare and plant by railway plus woodland	1.4		
Prepare planting by office		0.3	
Prepare main car park area		0.8	
Plant by office and main car park		1.2	
Prepare and plant mid-depot screen			1.0
TOTAL FOREST	1.4	2.3	1.0
GRAND TOTAL ALL ACCOUNTS	306.2	219.5	23.4
TOTAL ALL YEARS = PROJECT TOTAL			549.1

CONSTITUTION OF THE PHASE THREE WORKING PARTY

M Dinning	Assistant Conservator H&M, E(E)
J Kellie	Principal District Officer, Thetford
L C Couch	Conservancy Land Agent
E S Portlock	Area Land Agent
M N Haworth	Work Study Officer, East England Work Study Team
K G Buswell	District Officer H&M, Thetford
G O Cook	Conservancy Mechanical Engineer E(E)
R L Davies	Conservancy Civil Engineer E(E)
G Hobbs	Chief Forester, Brandon Central Depot
K E Wallis	Head Forester, East England Work Study Team

FIRMS TO BE INVITED TO TENDER FOR MACHINERY INSTALLATIONS

Gebr. Linck
Engineering Works
D-7602 Oberkirch/Baden
West Germany

(Agents: Kunz Engineering Ltd
Levenbank Works
Balloch
Alexandria
Scotland
Tel: Alexandria 52212)

M I Edwards
Engineers
Beck Cottage
Feltwell
Near Thetford
Norfolk

Boving & Co Ltd
Villiers House
41 - 47 The Strand
London WC2N 5LB

Dankaerts Woodworking Machinery Ltd
2,4 and 6 East Road
London N1 6AG

Torvale Engineering Ltd
Torvale Industrial Estate
Pembridge
Leominster
Herefordshire

Kirkbride Engineering Co Ltd
The Airfield
Kirkbride
Near Carlisle
Cumbria
Tel: (Kirkbride 577/8)

Sänger & Massierer KG
2878 Wildeshansen
Harpstedter Strasse 44
West Germany

Adrian Law Ltd
Millwood House
452 Dewsbury Road
Leeds
Tel: (0532) 706077

E T C Machinery Ltd
Elson Works
Ellesmere
Salop
Tel: (069171) 2185

William Reid (Forres) Ltd
General Engineers
St Catherines Road
Forres
Moray
Scotland
Tel: (Forres 2175)

PROPOSALS FOR THE REDEVELOPMENT OF BRANDON CENTRAL DEPOT

1. Introduction

Thetford Forest on the Norfolk-Suffolk border now consists of some 20,000 ha of plantations predominantly of pine. Afforestation by Forestry Commission (FC) began in 1922; timber production began after the war as thinnings became necessary in the earliest plantations and has continued to rise rapidly. In 1977/78 some 175,000 cu m of timber was converted to logs, pitwood, woodwool and pulpwood and it is forecast that the out-turn of the forest in 1989 will increase by over 40% to 243,000 cu m (for details see Appendix I).

2. Since 1947 the conversion of poles to pitwood and woodwool billets has been concentrated, in the interests of efficiency, at the Brandon Central Depot (BCD); simple specifications such as logs and pulpwood are sold direct to the customer from the forest. By 1959 the output from BCD was some 10,000 cu m, in 1977/78 it was 42,000 cu m and it is forecast to rise to 58,000 cu m by 1989 (for details see Appendix I). Ever since its inception development at BCD has been somewhat piecemeal; increases in programme have been accommodated by the greater use of mechanical methods for both conversion and materials handling. In 1976/7 it was recognised that a lot of the buildings and equipment were due for replacement and that there was considerable potential for improving both the efficiency of the depot and working conditions by redesigning the layout of the production line at the same time as unavoidable machinery replacement occurred.

3. Thetford has developed as a pitwood producing area because in the early days the mines provided the main outlet for the material, at a better price than the more limited outlets for fibreboard together with a greater potential for growth as forest production increased. The wide range of tree size available today enables the Commission to accommodate the sizes of prop required to further the import substitution programme; the added value derived from peeling, drying, cross cutting, splitting etc results in a profit/cu m greater than from any alternative markets.

4. BCD currently supplies the National Coal Board (NCB) with over 20% of their annual supplies of homegrown round and split pitwood. Over 100 different sizes of props are prepared and despatch to about 130 collieries. The peeling, conversion and seasoning of this number of props is a complex enterprise but the service this depot has been able to provide to the NCB has played a substantial part in the NCB's endeavours to increase the quantity of homegrown timber used in the mines. The Forestry Commission continues to co-operate with NCB to improve upon the quality of homegrown props and the service provided in order to extend the range of import substitution.

5. The production of pitwood at a central depot in a large forest is both more profitable than scattered production throughout the forest (see Appendix II which compares the costs of depot and forest production in three of the Commission's conservancies) and enables the supplier to provide the customer with a far better service from the central stock holding. There are further additional benefits in better and safer working conditions, closer supervision and quality control, on-site mechanical back up and repair service and superior drying conditions compared with forest sites.

The reasons for the redevelopment proposals

6. Much of the machinery is approaching the end of its life and buildings are overdue for replacement; the spasmodic and to some extent piecemeal development has resulted in a layout which can be considerably improved to increase efficiency by reducing production costs and to meet the demands of the further programme increases.

7. A Working Party representing all Conservancy interests and the Work Study Branch has investigated the problems of BCD over the last 2½ years and has reported at intervals from March 1977 to March 1979.

8. Just to maintain the present level of throughput, (intake 50,000 cu m, output 40,000 cu m) but at the same time improving safety standards and working conditions so far as is practicable will require an investment in replacement machinery and buildings estimated, at March 1979 prices, at £257,000. See Appendix III for details.

9. To limit new investment to this level will retain the present sub-optimal layout with a limited capacity for absorbing the increased programme envisaged.

10. The Working Party therefore investigated the problem further and recommended a redevelopment of BCD to improve the efficiency (output/man should rise by some 40%), safety and working conditions which will enable an increased programme of 70,000 cu m input to be handled by 1982; the programme is forecast to be stable around 70-75,000 cu m per annum at least until 1986. The estimated total cost of the complete scheme is £549,000.

11. The future marketing of the increased programme depends upon the purchase by the NCB of the pitwood to be produced.

The NCB has recently (May 1979) stated its preference for depot-produced pitwood as providing better quality and more reliable supply. It has confirmed that BCD is a vital source of supply and that the closure of BCD would necessitate a major re-appraisal of the NCB's import-substitution policy. The Board sees no reason for pitwood orders to the Forestry Commission to fall below 35-40,000 m3 p.a. in the period for which forecasts can reasonably be made at present - up to 1985. In addition a modest increase in demand for woodwool billets at 15,000 m3 p.a. is forecast following discussions with the trade, TRADA and PRL.

12. If the redevelopment programme does not go ahead then some 20,000 cu m will have to be marketed elsewhere with some difficulty and less profitably. If the funds cannot be made available for the essential replacement programme then consideration must be given to a gradual run down of BCD programmes with consequent marketing problems, loss of profit, redundancies etc and a severe blow to the cause of the use of locally grown timber in the mines. (It has been assessed that the BCD operation produced 3 times greater profit than directing the new material to the alternative markets, currently very limited, of pulp or chipboard material).

The detailed proposals

13. Depot layout (See plan inside front cover).

All depot operations will take place within a one-way ring road system the aim being to separate depot activities, as far as possible, from those of incoming lorry loads of poles from the forest and loaded lorries being despatched to customers. Poles will be unloaded at the far end of

O.K. for HCB + Woodwool but Pargets. Fencing which has

the depot to a stacking yard adjacent to the peeling unit to which they will be fed by front end loaders. Combined with the twin Cambio installation will be the bark mill. After peeling poles will be stored on the seasoning area between the peeler and sawmill to which seasoned poles will, in due course, be moved by front end loaders. From the sawmill sorting lines the finished product will be moved to the adjoining storage area to await despatch to the customer; to avoid the present discomfort and inefficiencies due to summer dust and winter mud this area will be progressively improved by tarmac surfacing. All static equipment will be powered by an underground electricity supply. The office, weighbridge, mess hut and workshop will be housed as at present near the entrance to the depot.

14. The cost of the civil engineering works are estimated as:-

	(£'000)
Ring road, roundabout and road signs	32.6
Surfacing to finished product area	21.6
Depot office car park	0.8
Staff car park	2.7
Total	57.7

15. Peeling capacity

The seven year old, electrically driven, Cambio 35 will be reconditioned, the 14 year old mobile Cambio must be replaced to ensure freedom from production hold-ups. This will be by a Cambio 45 to cater for the larger butts. The two Cambios and associated bark mill of increased capacity will be housed under one roof, access to the loading and unloading points will be provided by a tarmac apron and to ensure a clean product similar provision will be made for the bark storage bins which will be fed by conveyor from the bark mill. In order to have marketing flexibility provision will be made to produce both unmilled bark and matured milled bark.

16. The costs of the new peeler/barkmill are estimated as:-

	(£'000)
2 Peelers (1 new, reconditioning of a second)	39.0
2 Infeed decks and reject gear, rubbish conveyors	45.0
2 sets Automatic kick-offs and out-feed bins	33.0
1 Barkmill with infeed gear, metal detection and magnets	25.0
1 Bark conveyor and 5 bark bays	10.0
Installation charges and control fittings for all above	15.0
Dismantling of old peeler No 2	0.2
	167.2 c/for.

	(£'000)
b/for.	167.2
Less sale of old peeler and barkmill and scrap	3.0
	164.2
Add: Peeler/barkmill building	16.8
Internal wiring to machinery controls	5.0
Surfacing of aprons and bark storage area	12.1
	198.1

17. Sawmill capacity

The two widely separated production lines will be combined under one roof where all crosscutting and splitting will take place thus doing away with the current inefficient double handling of some of the produce. Both main saws - the 20 year old bandsaw for splitting and the locally evolved main pendulum crosscut will be replaced as will the subsidiary swing saws also of local design.

18. Three new crosscutting saws and one bandsaw will be housed in a single building with sawdust extractors and served by conveyor belts throughout. Larger pitwood will be sorted mechanically; some 65% of 1979/80 orders are for larger material weighing 50-100 kg (1-2 cwt) a piece. Working conditions within the new mill will be a vast improvement over the present primitive facilities which give little protection from wind, rain, dust or mud.

19. The costs of the new sawmill are estimated as:-

	(£'000)
3 Pendulum saws, with infeed systems	40.0
4 Conveyor systems (props, waste wood, cross-conveyor)	17.0
1 Bandsaw (splitting saw)	25.0
Emergency cut-out controls	2.0
Dust extraction system and silo	8.0
Conveyors to sorting lines. Automatic kick-offs	20.0
Installation costs and fittings for all above	15.0
Dismantle old sawmill shed	0.7
	127.7
Less sale of old saws, scrap etc	3.0
	124.7
Add: Sawmill building	58.3
Internal wiring to machinery & controls	5.0
Tarmac aprons	7.9
Total	195.9

20. Power supply

For reliability, flexibility and improved working conditions it is proposed that all static equipment will be powered by electricity supplied underground in the interest of safety and flexibility in the use of loaders and cranes. The load will be increased from 220 kVA to 522 kVA; the present transformer is overloaded but maximum use will be made of existing underground cables.

21. The cost of the necessary alterations and improvements has been assessed by the Electricity Board as £22,000.

22. Buildings

The three main buildings, office workshop and mess hut, are all approaching 40 years old; the office and mess hut are wooden sheds and the workshop an old Nissen type structure. Proposals to replace have been under discussion since 1970.

23. Mess hut - urgent replacement is now in hand and will provide improved facilities for washing, drying clothes, mess room and toilets. This building will be completed in 1979/80 and £13,000 is included in the budget.

24. Office - the present timber building (106 sq metres) which incorporates the public weighbridge control room is in very bad condition and constant 'make do and mend' operations are required to keep it weatherproof.

The proposed new office will have an area of 111 sq metres and its better design will provide for two more staff and the cost is assessed at £17,000.

25. Workshop - whilst the Conservancy workshops are only 3 miles away not only are they fully committed to other Conservancy work but are reached via the busy shopping centre of Brandon. The need for a small repair bay on site has been proven over the years and with the increase in mechanisation of depot operations, the flow line production system involving a high capital investment immediate attention to reduce down time is considered essential together with regular inspection and maintenance routines. This decision is confirmed by a study of similar depots and sawmills both in this country and W Germany. The present mechanic will be fully engaged in the redeveloped depot.

26. The present workshop, now urgently in need of replacement, provides a base for the mechanic to undertake maintenance and repairs upon the fleet of tractors, frontend loaders, forklift and crane together with some capacity for the storage of spares. It is simply equipped with tools and welding equipment and steam cleaning gear. The workshop also provides the opportunity for tractor drivers etc to undertake their daily and weekly maintenance under cover in adverse weather.

27. The new workshop will incorporate the storage facilities at present provided by an assortment of decrepit sheds and the repair workshop for all the chainsaws on Thetford Forest.

28. The cost of the new workshop building and equipment is assessed at £33,500 with an additional £2,000 for surfacing the apron and vehicle compound which will incorporate a vehicle wash and security fence costing £5,000. Total £40,500.

29. Labour It is considered that following redevelopment a staff of 40 (present staff 41) will be adequate to deal with the increased programme, representing an increase of 43% in the volume handled per person employed.

30. Landscape Whilst BCD must, of necessity, be a large open space to provide operational flexibility and good timber seasoning conditions the Commission's Landscape Consultant's advice has been sought with regard to building design and tree planting schemes which will cost £4,700 over 3 years. Informal consultations have taken place with the local planning authority.

31. Summary of costs of proposed works:-

	(£'000)
Peeler unit	198.1
Sawmill unit	195.9
Roading/surfacing/car parks	57.7
Power supplies	22.2
Buildings	70.5
Landscaping	4.7
	549.1

32. Return on proposed investment A study by FC HQ Economists in January 1979 and based upon £(1977/78) indicated that the proposed changes in depot operation and layout, with a single shift system, could be expected to produce an IRR of 17½% on the investment.

Further consideration in June 1979 suggests that on updated estimates of expenditure and revenue, the project is likely to be no less attractive.

33. Proposed timetable in summary

Year 1 Complete the construction of the new mess hut. Install the reinforced main power supply and underground feeder mains to the sites of the peeler unit and sawmill.

Continue main road surfacing and the surfacing of the finished product area.

Plant a rail-side tree screen.

Year 2 Replace office and workshop. Install the new peeling/bark-milling unit, bark storage and ancillary equipment.

Further surface the finished product area and construct the office car park. ?

Year 3 Install the new sawmill unit and ancillary equipment. Complete the surfacing of the ring road and of the finished product area.

Construct the main car park.

Carry out further tree planting.

? WASH BAY + FUEL TANKS - PUMPS.

Year 4 Lay the sawmill unit apron.

Complete tree planting work.

Refer to Appendix IV for details.

34. Basis of estimated costs

All costs are estimated as at March 1979; machinery costs have been assessed after consultation with a number of manufacturers and building costs by Conservancy Land Agent after consultation with MAFF, TRADA and a TRADA Farm company.

Material available from Thetford/N Norfolk District for depot supply

Projected markets for depot products

A. Data from current Production Plan (1977). All conifers. Thin + Fell. ('000m3 o.b.)

	1977-81	1982-86	1987-91	1992-96
To 7cm td ob	170.4	222.9	242.8	249.9
To 18cm td ob	105.0	157.7	177.6	182.0
7cm td to 18cm max diam o.b.	65.4	65.2	65.2	67.9
Less 5% (due to poor form) in producing depot poles)	62.1	61.9	61.9	64.5

B. To the above volumes must be added the proportion of the material over 18cm td ob which can be made available for the depot. Sawlog production forecasts confirm that logs will be available for long and medium-term log contracts and for auction, leaving 12,000 rising to 15,000m u3b for woodwool production and 15,000 rising to 20,000m3 ub for large pitwood. Converted to ob measure, these quantities total 32,000 rising to 41,000m3.

	32.0	36.0	41.0	40.0say
Add to totals in A above	94.1	97.9	102.9	104.5 ob

C. But since these volumes include all material from 7cm td to 18cm butt, we must deduct pulp and chipwood quantities to be supplied to Bowaters, PIM, Kronospan and Weyroc (1979/80 Sales plan 28,200m3) leaving for the depot: 65.9 | 69.7 | 74.7 | 76.3 ob

D. Allowing for a 20% bark/conversion loss, this will represent a depot output of:- 52.7 | 55.8 | 59.8 | 61.0 ub

E. This output could be marketed thus -

Pitwood	30.0	33.0	33.0	33.0
Woodwool billets	12.0	14.0	15.0	15.0
Posts, stakes, rails	5.0	6.0	6.0	6.0
Industrial & fuel wood	2.0	3.0	4.0	4.0
	49.0	56.0	58.0	58.0

F. A target intake of 70,000m2 p.a. ob could therefore be reached in the period from 1982-86.

DEPOT/FOREST WORKING

The table below prepared by Mr Busby, P&E, from Headquarters information, highlights the savings per m³ by depot working as opposed to forest working in NE(E) and the low cost overall of E(E) depot working.

ESTIMATED COSTS (INCLUDING ONCOST) OF PRODUCTION OF PEELED PROPS OR SPLITS

£/m³ u.b.
(output measure)

	140 m					180 m				
Conservancy	Load and haul to Depot	Peel	Crosscut stacking etc	Split	Total[1]	Load and haul to Depot	Peel	Crosscut stacking etc	Split	Total
1976/7										
E(E) Depot	0.90	0.78	3.05	1.60	6.33	0.90	0.78	2.49	1.60	5.77
S(W) Forest	-	4.30	2.30	3.50	10.10	-	3.30	1.90	2.85	8.05
1977/8										
NE(E) Forest	-	5.34	5.20	2.50	13.04	-	4.19	4.10	2.51	10.80
NE(E) Depot	1.26	4.00	4.05	2.00	11.31	1.26	2.20	2.30	1.90	7.66
E(E) Depot	1.20	1.40	3.75[2]	1.35	7.70	1.20	1.40	3.36[2]	0.99	6.95
S(W) Forest	-	5.20	2.40	3.90	11.50	-	4.65	1.95	3.60	10.20

Notes: 1. Sum of costs of producing peeled props + cost of splitting. Does not necessarily represent total cost of splits. In NE(E) in particular the total cost of splits is only 60 - 80% of the figure shown because large numbers of very small props are produced.

2. Adjusted to give correct total cost.

Expenditure necessary (at March '79 prices) over two years in order to maintain the present level of production at BCD.

Estate items	£
Completion of replacement of industrial mess/ washing/toilet facility.	13,000
Replacement of mechanical workshop	38,500
Replacement of depot office	17,000
Renewal and reinforcement of electricity supply	22,200
	90,700
Machinery	
One new Cambio debarker	35,000
Reconditioning of existing Cambio debarker	4,000
Installation of new Cambio with electric drive	6,000
Feed works for new Cambio	12,000
Operator protection	3,000
Replacement of old 'pendulum' crosscut & feeds	32,000
Replacement of old splitting saw	25,000
Saw installation costs, fittings	4,000
	121,000
Civil Engineering	
Completion of surfacing/resurfacing of main site roads	31,000
Resurfacing of parts of finished product storage area (7,200 m2)	14,400
	45,400
Total	257,100

	79/80	80/81	81/82	82/83
(a) Estate items				
Mess hut	13.0			
Workshop		38.5		
Office		17.0		
Peeler unit roofing		16.8		
Sawmill unit building			58.3	
New power supplies	22.2			
Peeler unit apron			6.3	
Bark storage area surfacing		5.8		
Sawmill unit apron				7.9
Staff car park			2.7	
Workshop apron & vehicle wash		2.0		
Office car park		0.8		
	35.2	80.9	67.3	7.9
(b) Mechanical engineering items				
Peeling & ancilliary equipment		164.2		
Saws & ancilliary equipment			124.7	
Internal wiring at each		5.0	5.0	
	-	169.2	129.7	-
(c) Civil engineering items				
Ring road	17.4		13.7	
Roundabout, signs etc			1.5	
Finished product area surfacing	7.2	7.2	7.2	
	24.6	7.2	22.4	-
(d) Forest items				
Prepare & plant rail-side area	1.4			
Prepare & plant by office & staff car park			2.3	
Prepare & plant mid-depot screens				1.0
	1.4	-	2.3	1.0
Total all items:	61.2	257.3	221.7	8.9
		Project total		549.1

BRANDON CENTRAL DEPOT BACKGROUND NOTE FOR EXTERNAL ADVISER

Brandon Central Depot (BCD) is an integral part of Thetford Forest District. Between ¼ and ⅓ of the timber harvested in Thetford Forest is hauled to BCD, where it is converted into pitwood, woodwool, fencing material and some other minor products. The conversion involves (i) peeling the timber, (ii) allowing it to season, (iii) crosscutting and splitting the timber into the required sizes. Operations are described in more detail on the attached "handout".

In 1976/7 it was recongnised that a lot of buildings and equipment were due for replacement and that there was considerable potential for improving efficiency and working conditions. A Working Party calculated that it would cost about £257 k (£79) simply to replace machinery and buildings upto a standard capable of dealing with an input of 50,000 m^3/year. On the other hand, an investment of £549 k would improve safety, working conditions and efficiency, and enable BCD to handle a programme of upto 70,000 m^3/year input. At that time it was believed that the major markets (NCB, and woodwool customers) would absorb this additional throughput and that, if the major redevelopment did not go ahead, it would be difficult to market the remaining 20,000 m^3 direct from the forest as profitably. A Financial Appraisal indicated that the investment could be expected to produce an IRR of 17½%.

The Treasury gave approval for major redevelopment at BCD. In the event this redevelopment (which is now virtually complete) cost just over £¾m. At the same time, the markets have not grown as anticipated and BCD's input is currently below 50,000m^3/year.

The Forestry Commissioner for Harvesting and Marketing has said that a Management Board should be establsihed for BCD. Its draft Terms of Reference are attached. An important feature of the Management Board is that, in addition to BCD's line managers, it should include an external adviser, for at least the first year. This adviser would be expected to give professional advice on the monitoring of the Depot's financial performance, from the cost and management accountancy point of view.

A copy of recent Trading Accounts prepared for BCD is attached. The external adviser would be expected to comment on the form of these accounts, and advise on how they might be improved so as to provide a better means of monitoring performance during the year, perhaps through the use of appropriate production indices. Another important issue is the 'transfer price' for the wood brought into the Depot from the forests. In addition, the adviser would be expected to act as an independent source of comments and suggestions during Management Board meetings.

DB Henderson-Howat
for Principal District Officer
Thetford & Norfolk

Dr.A.L. Bushell & Associates

Executive Staff Training
Carlton House, 18 Ipswich Road, Norwich, NR2 2LX
Telephone : (0603) 53062

Anthony Bushell.....A resume of recent activities and qualifications.

Full time occupation: Senior Lecturer in Management Studies at the Management Centre Norwich City College. Specialising in Operations Management, Management Accountancy, and Information Systems using Micrucomputers.

Part time activities: Director and Company Secretary for a Computer Software co.

Chairman of Norfolk Branch of the Institution of Mechanical Engineers.

Chairman of Norfolk Professional Engineers (ex Council of Engineering Institutions)

Lecturer to the Agricultural Training Board

Consultant to the Assembly House, Norwich. The design and implementation of a Management Information system. (ref. available from Trustees including M.D of Eastern Counties Newspapers, and M.D Jarrold & Son, Norwich)

Consultant to Thurton Foundries, Norfolk. Design and implementation of a production planning and control system.

Consultant to Oak Tree Computers, Fakenham. Design of a Marketing plan.

Consultant to Kirk-Dyson Ltd (Ball wheelbarrow manufacturers) on a company corporate plan.

Currently on Presidents Working Party with 5 others, examining t the future role of the'Professional Institution'for Mechanical Engineers.

Proposed Contract between the External Advisor (ALB) and the Forestry Commission

1. Attendance at Full Management Board Meetings. £75.00 per half day.
2. Design and Development Advisory Meetings with the Depot Manager. To include all time spent by the advisor in preparing materials for discussion at these meetings relating to management accountancy and general information systems for production processes and marketing distribution etc. £150.00 per half day.
3. The continuation of the External Advisors Contract (ALB) to be unanimous decision of the Full Board at the proposed meetings for Weeks 5, 9, & 13. There will be no termination fees to be paid to the External Advisor other than for the meetings attended.
4. Travel expenses are to be paid in addition to the Meeting fees.
5. All information supplied by the external advisor or given to the external advisor for the purposes of this assignment to be confidential and all papers relating to the assignment to be returned to the Chairman of the Management Board at the termination of the assignment.
6. All fees to be paid to the External Advisor monthly by cheque.

23rd February 1984

To: M. Dinning
Asst Conservator (H.M)

From: A.L.Bushell
Management Centre, Norwich City College

Subject: Proposal for Advisory Assignment at the Brandon Central Depot

This Proposal is presented in the form of a timetable of advisory activities over a 52 week period. At appropriate dates as indicated later, opportunities exist for the curtailment, modification, or approval of subsequent activities. The terms of reference of this Proposal are included in the Draft document entitled 'BCD Board of Management'.....Suggested Membership etc..
It is proposed that all meetings are held on a specific day of the week in the morning and last for 3 hours. (e.g 0915-1215 hrs)

Timetable

Week number	Description of Meeting
1	Full Management Board to approve Timetable
2- 4	Depot Manager and ALB. Familiarisation and design concepts of marketing, production, and information systems.
5	* Full Board Meeting to assess progress.
6- 8	Depot Manager and ALB. Development of a new Marketing, Production, and information system.
9	* Full Board Meeting to assess progress.
10- 12	Depot Manager and ALB. Testing of new systems.
13	* Full Board Meeting to assess progress.
18	Full Board Meeting to assess progress.
22	do
26	do
39	do
52	do

(Meetings marked * decide stop, modify, or proceed)

It is proposed that there are 3 periods of 3 weeks during which the Depot Manager and the External Advisor (ALB), together with other interested parties if appropriate, design, develop, and test a system for improving the performance of the BCD.

Dr.A.L. Bushell & Associates

Executive Staff Training
Carlton House, 18 Ipswich Road, Norwich, NR2 2LX
Telephone : (0603) 53062

Proposed Management Action Programme for BCD

For: M Dinning
From: A L Bushell
28th May 1984

1. To forecast, quantitatively, the level of activity at BCD over the next 5 years, assuming that there is no significant change in marketing, production, or supply strategies.

2. To ascertain the minimum 'returns' expected from BCD by the Forestry Commission for the continuation of BCD activities.

3. To measure the 'gap' between requirements and forecast.

4. To creatively generate strategies in marketing, production, and supply which could be used to bridge the 'gap'. Such strategies would be developed by examining BCD's strengths and weaknesses, in addition to an assessment of the environments oppportunities and 'threats'. The whole marketing range of strategies from increasing current demand to existing customers through to the supply of new products to new customers must be examined. The selection of certain strategies will be based on detailed financial and resource measurements.

5. Examples of typical strategies might be: a. Investment in more saw mill equipment
   b. Sponsoring with M.S.C new small local businesses.
   c. Using 'scrap' for drying facilities.

6. Following the formulation of the new strategic plan, an information system has to be designed in order to measure and monitor the plan. This system will collect appropriate data at appropriate frequencies from:
   a. The customers and the distribution network
   b. The production environment, including quality control, and storage.
   c. The supply environment.

This data will be processed, possibly by a microcomputer, to give information on

Dr.A.L. Bushell & Associates

Executive Staff Training
Carlton House, 18 Ipswich Road, Norwich, NR2 2LX
Telephone : (0603) 53062

a. Customer satisfaction, market prices and demand forecasts.
b. Production efficiences, costs and forecasts.
c. Supply costs and forecasts.
d. BCD overall 'profitability' and forecasts.

7. Information will be produced in a format suitable for ease of communication and related to responsibility e.g marginal costing and extensive use of 'ratios'. The system will ensure that all the information needed by staff to act in the FC's best interests will be available.

8. It may be necessary to train staff in the use of financial measurements as aids to better management.

9. The management system itself must be examined regularly to make sure that it is kept relevant.

BRANDON CENTRAL DEPOT - BOARD OF MANAGEMENT

Membership
Forest District Manager, Thetford - Chairman
Assistant Conservator (Harvesting and Marketing) E(E)
District Forester i/c BCD (Depot Manager)
External Advisor

The Board is authorised to call upon the services of other Forestry Commission staff as necessary.

Terms of Reference

1. The Board shall be responsible to the Conservator, East England for the commercial operation of the depot.

2. The Board will be responsible for the financial success of the operation. This should involve:

   a. establishing an appropriate system of accounts and analysing these accounts;

   b. directing performance to maximise profit in terms of the trading account;

   c. reviewing performance annually in terms of the 1979 appraisal.

3. The Board will at all times be responsible for measures required to improve financial results. With the exception of any further capital investment, for which Conservator's or Commissioners' authority may be required, the Board will be expected to implement changes without further reference.

4. The main constraints upon depot operations at Brandon are:

   a. no further significant capital investment;

   b. a reducing total round pitwood demand from the National Coal Board;

   c. the policy constraint of not creating a fully fledged sawmill.

Frequency of Meetings

The Board will normally meet quarterly, though more frequent meetings may be required in the early stages.

Progress Reports

The Chairman will report quarterly to Conservator, East England, and more frequently if poor performance requires immediate action. He will report operational and financial performance and measures proposed or taken to improve them.

APPENDIX 11k

To CONS E(E)

Attn MR N DANNATT, ASSIST CONS OPS

Copy FDM THETFORD

FROM C/F BCD

REF U11/1/1

BCD - NARRATIVE REPORT

FEB - MARCH 1986

INPUT SHEET 1 - the situation as reported at the end of January has been maintained but the ongoing imbalance in diameter range between supply and orders remains a major problem. Cambio stocks are minimal and certainly well below that required to service orders adequately.

Smallwood stock is virtually nil which, at the time of year when fencing products are in greatest demand, creates added difficulties.

It is imperative that Sales Plan input of Cambio and Smallwood particularly is achieved if we are to have any chance of meeting our commitments during the coming year.

WORK IN PROGRESS SHEET 2 - over the 8 week period increase in value of almost £56000 largely due to adjustment resulting from physical stock check.

FINISHED STOCK SHEET 3 - overall, value much as at the end of January with reduced PSR value offsetting increased Pitwood value which was partially due to price increase at March 1st.

Weeks in hand reduced from 4.3 to 3.8 which with virtually the same stock value as at the end of January, reflects improved uptake over the previous quarter.

SALES ANALYSIS SHEET 4 - improved PSR Pitwood and Woodwool sales with internal FC transfers exceeding £2000, combined to achieve virtual parity with budgeted figure over the 8 week period.

Improved Pitwood and Woodwool prices made a major contribution to this improvement because the new British Coal year started on March 1st and Torval anticipated FY86.87 contracts for Woodwool.

This was offset to some extent by disappointing bark sales compared with previous years at this time, but uptake improved towards the end of March to some extent.

PROFIT/LOSS SHEET 5 - the combined surplus for the 8 week period totalled £103900 which, even discounting the effect of increased WIP value and the haulage rebate, indicates a welcome trend towards improved performance which is further confirmed by Sheet 6, the 6 month summary sheet.

B Griggs
23.5.86

BRANDON MANAGEMENT ACCOUNTS.

SHEET 1. PURCHASES

PERIOD ENDING: 30-3-86

WEEKS IN PERIOD: 4

TYPE	VOLUME m^3	INDEX PRICE (ANALOG)	VALUE £	CUM. ACTUAL TO DATE	CUM. PLAN TO DATE	% PURCHASED
CAMBIO POLES	705	12.60	8883	110690	89460	124
LONG BUTTS	2392	22.89	54753	754775	931623	81
SMALL WOOD	98	12.60	1235	16317	13860	118
HAULAGE	3195	2.11	6741	90843	103179	88
TOTALS			71612	972625	1138122	85

MINUS OVERCHARGE — ACTUAL HAULAGE COST £1.73/m^3 BUDGET £2-11/m^3 £1629 ADDED TO PURCHASES DISCOUNT SHEET 5.

NOTES: 1. ANALOGS FROM LS.

2. VOLUMES FROM BG PRODUCE LEDGER

3 CUM PLAN IS BUDGETTED PURCHASES SINCE START FINANCIAL YEAR.

4. % PURCHASED = ACTUAL/PLANNED EACH PRODUCT & TOTAL

BRANDON MANAGEMENT ACCOUNTS

SHEET 2. WORK IN PROGRESS

PERIOD ENDING: 30.3.86

WEEKS IN PERIOD: 4

TOTAL VOL. m^3	SALES VALUE LESS 10% £		TOTAL VALUE £
18462.	34.96		645524
LESS WORK TO DO:		*	
OPERATION	VOLUME m^3	COST £/m^3	
PEELING	10925	2.02	22068
CONVERSION	14400	7.12	102528
GRADING	14400	0.50	7200
BUDGET AVERAGE W.I.P £ 343000.	TOTAL DEDUCTIONS		131796
	WORK IN PROGRESS THIS PERIOD (X)		513728
	WORK IN PROGRESS LAST PERIOD (Y)		476096
	DIFFERENCE IN WIP (X) - (Y)		37632 *5

* F.Y. 86-87 BUDGETED COSTS.

NOTES.

1. TOTAL VOL. (ESTIMATED BY SAMPLING) VALUE) GIVEN BY BCDZ AVAILABILITY SHEET.
2. DEDUCTIONS INCLUDE 15% BARK ALLOWANCE AND SAWDUST CORRECTION.
3. DEDUCTIONS DO NOT INCLUDE ON COST.
4. SALES VALUE IS BUDGET INCOME / m^3. F.Y. 86-87
5. * DIFFERENCE VALUE CARRIED FORWARD TO PROFIT A/C
6. AWP 7 PRACTICE FOLLOWED IN 'LESS 10%' ETC

BRANDON MANAGEMENT ACCOUNTS

SHEET 3. FINISHED STOCK

PERIOD ENDING: 30.3.86

WEEKS IN PERIOD: 4

REF. ITEM	PRICE LESS 10% £/m³ (1)	THIS PERIOD END VOL. m³	THIS PERIOD END VAL. £	% VOL	% VAL	LAST PERIOD END VOL. m³	LAST PERIOD END VAL. £	STOCK VALUE CHANGE +/− £	WEEKS IN HAND	CHANGE WEEKS +/−
PSR	37.45	307	11497	6	8	389	14336	−2839	6.0	−4.3
SAWLOGS	13.50	280	3780	6	3	300	4170	−390	13.6	−16.0
PITWOOD	41.63	1197	49831	24	37	1287	54170	−4339	1.9	−0.4
WOODWOOL	31.20	1826	56971	38	42	1900	58426	−1455	12.7	−2.0
BUNGWOOD	—	—	—			—	—			
BARK PELL'D	10.30	500	5150	10	4	350	3633	+1517	18.3	+4.7
BARK PULV.	12.10	700	8470	14	6	1000	12250	−3780	6.9	−5.3
SAWDUST	1.55	60	93	1	—	50	90	+3	2.6	—
FIREWOOD	10.50	60	630	1	—	25	231	+399	1.2	+0.7
TOTALS	27.67	4930	136422	100	100	5306	147306	(4) −10884	(5) 3.8	−0.9

NOTES: 1 – VOLUMES FROM BCO PRODUCE LEDGER

2. PSR & PITWOOD NEW STOCK LEDGER

3. VALUES FROM MEAN CONTRACT PRICES & CONSIGNMENT PRICE LISTS

4. TOTAL CHANGE VALUE CARRIED FORWARD TO PROFIT A/C.

5. CALCULATION OF WEEKS IN HAND EQUALS STOCK VALUE DIVIDED BY AV. WEEKLY SALES IN QUARTER

BRANDON MANAGEMENT ACCOUNTS
SHEET 4. SALES ANALYSIS

PERIOD ENDING: 30.3.86
WEEKS IN PERIOD: 4

REF. ITEM	AVE. SALES VAL. £/m³	THIS PERIOD VOL m³	THIS PERIOD VAL £	% VAL	RUNNING QUARTERLY £	RUNNING ANNUALLY £	AVERAGE WEEKLY SALES £ PERIOD	QUART.	ANNUAL	BUDGET
SPECIAL POLES	122.0	—	22	—	44	536	5	3	10	—
SAWLOGS	16.60	136	2258	1	3613	14719	564	278	284	737
PSR	36.71	262	9619	6	24845	96172	2405	1911	1850	2538
PITWOOD	54.55	2084	113672	66	333944	1298285	28418	25689	24967	29019
WOODWOOL	34.13	831	28364	16	58256	219162	7091	4481	4215	4462
BUNGWOOD	51.92	99	5140	3	12320	50395	1285	947	969	808
BARK PEELED	11.53	47	542	—	3650	18249	136	281	351	371
BARK PULW.	13.38	595	7962	5	15870	71269	1991	1221	1371	1552
SAWDUST	1.54	68	105	—	469	1699	26	36	33	25
FIREWOOD	10.17	110	1119	2	6596	19783	280	507	380	123
WASTEWOOD	8.80	100	880		880	3960	220	68	76	130
FUELWOODPULP	9.60	100	960	1	960	960	240	74	18	—
TRANSFERS	40.12	49	1966	1	2084	3523	491	160	68	—
TOTALS	38.52	4481	172609	100	463531	1798722	43152	35656	34592	39765
BUDGET	34.12	4662	159062	88.5	516950	2067800	39765	39765	39765	39765

NOTES: 1. VALUES FROM BRANDON PRODUCE LEDGER
2. SALES VALUE/m³ = VAL/VOL

[yield]

BRANDON MANAGEMENT ACCOUNTS

SHEET 5. PROFIT/LOSS

PERIOD ENDING: 30.3.86

WEEKS IN PERIOD: 4

BUDGET		HEADING			ACTUAL
159062.		PERIOD SALES (SHEET 4)			172609.
21146.	LESS COSTS	WAGES	21667		
21885		CASH PURCHASES	23450		
		NON-CASH			
19611		PURCHASES (SHEET 1)	21612.		
15400		VME CHARGE	15745		
8338		TOTAL ON-COSTS	9132		
48645 2265		OVERHEADS	2971	144577	
5970.	ADJUST. LESS	PURCHASES DISCOUNT	5370.		
		PURCHASES OVERCHARGE *	(16248)		
		STOCK DIFF (SHEET 3)	(10884)		
142675		WIP DIFF (SHEET 2)	37632	48397	96180
16387		PERIOD SURPLUS			76429
53256		RUNNING QUARTERLY SURPLUS			83230
213000		RUNNING ANNUAL SURPLUS			186990

NOTES.

1. TOTAL 'ADJUSTMENTS' IS SUBTRACTED FROM TOTAL COSTS
2. WAGES EXCLUDES ON COST & O/H BUT INCLUDES VME OPS.
3. NON-CASH COSTS ARE INTERNAL TRANSFERS
4. BUDGET FIGURES ARE 2 MONTH PLAN PRO RATA
5. PURCHASES DISC. 7½% (TRADING A/C STAND. ADJ)

* ADJUSTMENT TO ALLOW FOR REDUCED ACTUAL HAULAGE COST OVER WHOLE YEAR

MARCH 86

PERIOD END & AVERAGE WEEKLY ANALYSIS

SUMMARY VALUES (£) FOR LAST 6 MONTHS

PERIOD ENDING		3.11.85	1.12.85	29.12.85	2.2.86	2.3.86	30.3.86
WEEKS IN PERIOD		5	4	4	5	4	4
PURCHASES	*CAMBIO	2733	3418	1956	2502	1811	2221
	*L/BUTT	14063	15828	11514	13615	16360	13688
	*S/WOOD	549	642	460	244	246	309
	*TOTAL	17389	19888	13930	16361	18417	16218
WORK IN PROGRESS		429145	468303	478084	459111	476096	513728
STOCK	PSR	15219	18410	14838	17562	14336	11497
	SAWLOGS	3524	4229	4933	4726	4170	3780
	PIT	34789	31662	40466	40697	54170	49831
	WOOD/W	58118	52618	51782	57658	58426	56971
	BARK PE.	1170	3073	6642	5685	3633	2150
	BARK PJ	4740	4744	4880	8554	12250	8470
	OTHER	336	458	1658	3558	321	723
	TOTAL	117896	115694	125199	135240	147306	136422
SALES	*SAWLG (SPEC YIELD)	120	317	120	172	124	564
	*PSR	1027	1367	714	1540	1882	2405
	*PIT W	30496	26030	22866	22226	27284	28418
	*WOODW	7683	6787	2194	2305	4592	7091
	*BUNG.	1043	818	992	914	653	1285
	*BARK PE	404	192	88	435	233	136
	*BARK PJ	1657	797	1288	953	786	1991
	*OTHER	541	648	312	557	794	1257
	TOTAL	42938	36986	28574	29106	36348	43152
SUMMARY	*TOTAL COSTS	35224	38146	32425	33765	38249	36144
	*WAGES	4716	5287	4272	5293	5948	5416
	*PROFIT	(1571)	9700	1374	(4134)	6867	1910

* AVERAGE WEEKLY VALUES £

	ACTION	INFO.	INIT.
C/F		✓	
FOR		✓	RAH
FMAN			

APPENDIX 111

Ref: U11/5

To: Conservator E(E)
Attn. Mr Dinning

Copy: Mr Griggs

2 January 1986

BCD BOARD OF MANAGEMENT - ROLE OF EXTERNAL ADVISOR
DR A L BUSHELL

Arising from an HQ Harvesting & Marketing audit in October 1983, the Commissioner H&M proposed that a Board of Management should be set up for Brandon Central Depot (BCD) which should include an 'External Advisor', with cost accounting and industrial management experience, for at least its first year of operation.

The terms of reference for the Board were presented by Conservator E(E) in June 1985 and it was envisaged that the external advisor would be expected to give professional advice on;

1. The monitoring of the Depot's financial performance from the cost and management accounting aspects.

2. The form of the Trading Account and advise on how they might be improved so as to provide a better means of monitoring performance and interpreted in order to assist in the improvement of profitability.

3. The role as an independent source of comments and suggestions during Board of Management meetings.

Following initial contacts from January 1984, Dr Bushell, a senior lecturer in Management Studies at the Management Centre, Norwich City College, and consultant to various local industries and organisations, was employed as an External Advisor under an agreed contract in July 1984. He attended his first meeting of the Board on 30 October 1984.

Dr Bushell's fee over the eight months he assisted the Board was £1,432.90 - (0.2% of the current annual operational budget for BCD) made up as follows;

6	Board meetings	-	£450.00
6	Visits to BCD	-	£775.00
	Travel expenses	-	£207.90
			£1,432.90

Dr Bushell's contract as external Advisor was terminated in April 1985 on the understanding that he would be available for periodic consultation when required by the Board as threshold problems arose.

Dr Bushell set up a proposed 'Management Action Programme' in May 1984 but this was radically reviewed at the first Board Meeting because of inherent constraints already imposed upon BCD. The 'Advisory Assignment Schedule' he set up was basically adhered to. Dr Bushell very quickly mastered the background to the technical procedures, inhouse record keeping and the complex marketing of products at BCD, under the guidance of Mr Griggs with whom a very good working relationship was established.

The major contribution arising from Dr Bushell's work was the setting up of a local management information system (Brandon Management Accounts) purposely designed for BCD which is now assisting the depot manager in confirming trends in both costs and markets and, through monthly reviews, enabling an improved on-line control of stock, changing markets and other developments, plus a statement of 'Profit/Loss' at operational level. THis does involve the depot manager in increased administrative time but the information system has been geared to be easily adapted to a computer system.* The Board will give consideration to Dr Bushell's future involvement in setting this up now that the computer has been installed at BCD.

Other areas of assistance and advice covered, in particular, the following;

1. Interest and VME charges on the Trading Account.

2. Marketing plan for posts, staked and rails.

I would suggest that the professional advice expected from Dr Bushell and the Boards Terms of Reference was acheived, plus the bonus of his refreshing views and insight to the depot's current problems.

L M Simpson
Forest District Manager
Thetford

A Marketing Plan for PSR

Present Situation: PSR sold 815 m^3 in the 5 week period ending dec. 2nd 1984. This is at £27,700 24% of the total sales value. The average raw material cost of PSR is £18.5 per m^3 and the average conversion costs are £10 per m^3. At a sales value of approx. £34 per m^3, PSR contributes about £5.5 per m^3.

The current period profit requirements of BCD is approx. £4000. with period fixed costs at approx. £30,000 (5 weeks) Thus total contribution required is £34.000.

Objectives: PSR contributes approx. 30% towards BCD profits. That is, a contribution of approx £11,000 per period.

Budget: Sales of PSR are increased to give 30% total contribution. This implies a period sales volume of 2000m^3. i.e an average of 400m^3. per week.
Sales of PSR needs to be doubled at least.

Action:

1. Market Research information.
   a. Who is customer
   b. Where is customer
   c. Who is competitor
   d. What will be competitors reaction.
   e. Who is decision maker
2. How to distribute to customer
   a. direct selling
   b. wholesalers etc.
3. How is customer informed about product
4. How is product sold and by who.
5. Organisational changes required to accomodate new selling operation to locate responsibility and authority to plan and control.

Proposal: A low cost advertising budget to the local press and to other news media (editorial comment) to local Chamber of Commerce, MSC, to inform about Opportunities for new industries. FC must be prepared to offer advice and encourageme

Proposal cont:

The low cost budget would not exceed £500.00 over a 6 week period. Results would be monitore If a product credibility is established a full Action program as listed above would be undertak A low cost set of notes containing price list, suggestions for products, and how to purchase and how to collect product.

Spin-Off:

If the outcome is not successful in total terms, it would do FC no harm to be seen to be trying to help local entrepreneurs. There could be outcomes which are yet to be imagined. No action would not encourage innovation. Staff at 'lower' level than marketing staff at Cambridge would become aware of the customer, aw of giving a service, and more aware of costs and cost control.

Quotes:

Selling starts when the customer says 'NO'.

Everybody is in the Marketing Department.

TRADING ACCOUNT- BCD Year Ending 31 March 1984

		(£'000)
Total Income		1605.4
Timber Costs	803.6	
Wages/Material	445.0	
VME charges	217.3	
Oncost	93.1	
Other overheads	57.1	
	1616.1	
plus open. stock	328.5	
	1944.6	
less close. stock	391.7	1552.9
Surplus		52.5
Appropriations:		
Higher overheads		55.6
Interest at 3%		~~31.3~~ 33.2
Profit (Deficit)		~~(34.4)~~ 36.3

The interest charge of 3% is charged by the owner of the assets, suitably valued at replacement cost, to help defray the cost of acquiring the assets. Since the owner is not a risk taker and has no equity capital, the 3% is the sole requirement expected. Thus profits of BCD need to cover this charge and no more.

Your ref: U2/13/1
ref: U11

Forest District Office
Santon Downham

Conservator E(E)
Attn: Mr M Dinning - A/C Ops

11 December 1985

copy: Mr L Simpson
Mr B Griggs

BCD REPORT - THE FUTURE

Draft of the above has been duly revised following our discussion. Please find enclosed the second draft for your information. When further comment is received from the Depot Manager* this will be incorporated in a final draft for action as per your minute to FDM dated 18 November.

J F Ogilvie
for Forest District Manager
Thetford

enc

* Can we please discuss when convenient?

COMMERCIAL IN CONFIDENCE

BRANDON CENTRAL DEPOT - THE FUTURE

Background

Between 1947 and 1979 the development of production facilities at BCD was fairly piecemeal. In 1976 it was recognised that much of the equipment and buildings required modernising and replacing. A working party comprising Conservancy and Work Study staff considered the problem between 1977 and 1979, recommending the redevelopment of BCD to improve efficiency, safety and working conditions.

Redevelopment

The case for redevelopment presented by the Working Party was based on a number of important assumptions. Six years later, actual events have proved to be different from the anticipated outcome in virtually all respects. Below is set out a resume of the main factors which were considered in putting forward the case for redevelopment - Cost, Programme, Demand and Efficiency, - together with analyses of performance against prediction. Some of the reasons underlying the failure of assumptions to be realised are presented. Finally, an attempt is made to look into the future and assess the nature and role of BCD during the next quinquennium.

1. Cost

Two options were appraised by Planning and Economics Branch, HQ.

The first option (2) - to replace existing machinery and buildings to a standard capable of dealing with an input of 50km³ - was estimated to cost £257K (£79/80). The second option (3) - to enable BCD to handle a programme of 70km³ per year by improving efficiency, safety and working conditions, - was estimated to cost £549K (£79/80). The latter option was estimated to produce an IRR of 17½%.
(1) This option was selected, and Treasury approved expenditure (updated to years of construction) was exceeded by only 0.9%. (see below)

A	B	C	D	
Working Party Budget Estimate	Treasury-approved Budget	Treasury-approved Updated Budget (to yrs of constructon)	Actual Expenditure (to yrs of construction)	Variance
549k(£78/79)	614.9 (£78/79)	£759.2	£766.2	£7.0 (0.9%)

(1) U11/2 dated 23.6.85 D Henderson-Howat Appendix I.

(2) See over)
) Proposals for the Redevelopment of Brandon Central Depot (undated).
(3) See over)

2. Programme

In presenting the case for redevelopment (1) it was estimated that a target input of 70Km³ would be reached in the period from 1982-86. Since redevelopment, input to BCD has averaged only 46Km³ or two thirds of design capacity. (see table below). In practice, throughput has been demand-driven rather than supply-driven. Actual throughputs thus reflect the demand picture and this aspect is covered further in section 4 below.

Year	Input (Km³)
1980-81	56.0
1981-82	41.5
1982-83	42.1
1983-84	49.1
1984-85	40.7
1985-86	45.0(estimate (2))

The option to redevelop BCD to handle an annual input of 70Km³ was based on the 1977 production plan. This forecast of production was revised downwards via a special 1984 forecast (see below) principally to account for the depredations of Peridermium pini. This disease is currently affecting over half the older Scots pine crops within the Forest District.

Two other factors will further reduce the 1984 figures: the disposals programme (over 5% of the total plantation area has been sold - much of it in BCD category sizes) and long term retentions for landscaping and conservation reasons.

Year	1977 forecast (Km³)	1984 forecast (Km³)	1984 as a % of 1977
1977-81	170	-	-
1972-86	223	202	90%
1987-91	243	207	85%
1992-96	250	191	76%
1997-2001	-	122	-

(1) Proposals for the Redevelopment of Brandon Central Depot (undated).

(2) Estimate based on achievement at half year period. Sales Plan input = 49Km³.

3. Efficiency

The Working Party, in analysing the redevelopment to improve efficiency, estimated that output per man would rise by some 40%. Below is presented data on labour force,output and efficiency.

Year	Workforce (1)	Output Km^3 OB (2)	Efficiency (output/man)(m^3)	% on 79/80 level
975/76		42.2		
976/77		37.8		
977/78	38	41.4	1089	84%
978/79	40	45.1	1128	87%
979/80	41	52.9	1290	100%
980/81	41	49.9	1217	94%
981/82	40	55.7	1393	108%
982/83	38	55.2	1453	113%
983/84	39	52.1	1336	104%
984/85	38			

The redevelopment process was not completed until 1983. This period saw an increase in output per man of 13% on 1979/80 levels. However, efficiency dropped back to 4% of 1979/80 the following year, due to marketing problems. At this time the depot responded to demand shortages by diverification into opportunist markets, mainly fencing.

From the above analysis it is evident that Working Party predictions of improvements in efficiency as gauged by output (utilisation and despatches) per man have not materialised. At current labour levels, a difference of one worker makes a difference to efficiency of between 2 and 3%.

In order to produce efficiency levels as projected by the Working Party, it would be necessary to cut staff to around 29, given an assumed output of $53Km^3$ (1979/80 level).

(1) Includes all depot staff, industrial and non-industrial. File information.

(2) From U6s part D 10/6 Total despatches (m^3). Affected by input, changes in stock levels and bark production which produces a net increase in volume following processing.

REDEVELOPMENT - OPTION 1

Expenditure necessary (at March '79 prices) over two years in order to maintain the present level of production at BCD.

Estate items	£
Completion of replacement of industrial mess/ washing/toilet facility.	13,000
Replacement of mechanical workshop	38,500
Replacement of depot office	17,000
Renewal and reinforcement of electricity supply	22,200
	90,700
Machinery	
One new Cambio debarker	35,000
Reconditioning of existing Cambio debarker	4,000
Installation of new Cambio with electric drive	6,000
Feed works for new Cambio	12,000
Operator protection	3,000
Replacement of old 'pendulum' crosscut & feeds	32,000
Replacement of old splitting saw	25,000
Saw installation costs, fittings	4,000
	121,000
Civil Engineering	
Completion of surfacing/resurfacing of main site roads	31,000
Resurfacing of parts of finished product storage area (7,200 m2)	14,400
	45,400
Total	257,100

REDEVELOPMENT - OPTION 2

(a) Estate items	79/80	80/81	81/82	82/83
Mess hut	13.0			
Workshop		38.5		
Office		17.0		
Peeler unit roofing		16.8		
Sawmill unit building			58.3	
New power supplies	22.2			
Peeler unit apron			6.3	
Bark storage area surfacing		5.8		
Sawmill unit apron				7.9
Staff car park			2.7	
Workshop apron & vehicle wash		2.0		
Office car park		0.8		
	35.2	80.9	67.3	7.9
(b) Mechanical engineering items				
Peeling & ancilliary equipment		164.2		
Saws & ancilliary equipment			124.7	
Internal wiring at each		5.0	5.0	
	-	169.2	129.7	-
(c) Civil engineering items				
Ring road	17.4		13.7	
Roundabout, signs etc			1.5	
Finished product area surfacing	7.2	7.2	7.2	
	24.6	7.2	22.4	-
(d) Forest items				
Prepare & plant rail-side area	1.4			
Prepare & plant by office & staff car park			2.3	
Prepare & plant mid-depot screens				1.0
	1.4	-	2.3	1.0
Total all items:	61.2	257.3	221.7	8.9

4. Demand

Pitwood and woodwool comprise the major products marketed from BCD. Together they account for 55% of volume output, equivalent to 80% of value output.

(a) Pitwood

In the Working Party document, it was emphasised that the NCB saw no reason for pitwood orders to the Forestry Commission to fall below 35 - 40 Km^3 per year during the period 1979-1985.

In 1982 (3) the NCB indicated that following a decision to reduce imports of round mining timber, additional volumes would be required from British sources, as follows:-

Year	Additional Volume (Km^3 ub)
1983/84	10 - 13
1984/85	20 - 23
1985/86	18 - 21
1986/87	12 - 15 (estimate)

This additional demand has not materialised as far as BCD is concerned. Moreover, since 1980, annual contract volumes placed by NCB to BCD have not exceeded 33Km^3, the average being 29Km^3. With the exception of 1980/81, the NCB has consistently failed to place orders (requisition plus supplements) up to the volume specified by contract. (see below) The effect of the mining industry industrial dispute can be seen in the post-1983 uptake figures.

Year	Sales Plan (a/c 03770)	Pitwood Contract (2)	Pitwood Actual Uptake (1) Km^3 ub	Actual as % of contract
975/76			27.6	
976/77			27.3	
977/78			28.4	
978/79			27.9	
979/80	31	29	28.4	98%
980/81	32	31	29.7	96%
981/82	32	29	29.1	100%
982/83	34	26	24.2	93%
983/84	24.7(+8-10 tendered)	28	23.5	84%
984/85	36	28	14.2	51%
985/86	39.6	33	26(forecast)	79% (forecast)

4 (b) Woodwool

The Working Party document indicated that discussion with TRADA and PRL suggested an estimated demand for woodwool billets of 15Km³ per annum. Despite these forecasts, annual woodwool demand has consistently fallen below 8Km³ . (see below).

Year	Woodwool Sales Plan (a/c 03790) Km³ ub (4)	Actual Update Km³ ub (1)	Actual as % of contract
1979/80	12.0	8.1	68%
1980/81	14.0	7.5	54%
1981/82	12.0	6.0	50%
1982/83	14.0	6.1	44%
1983/84	7.0	6.8	97%
1984/85	8.0	6.0	75%

Thus, as with pitwood, actual demand for woodwool has fallen far short of projected demand. This has been due largely to the effects of the economic recession on demand for woodwool cement slabs and blocks for industrial/ commercial construction.

(1) From U6. Category Round Mining Timber, peeled (col 6 total despatches).

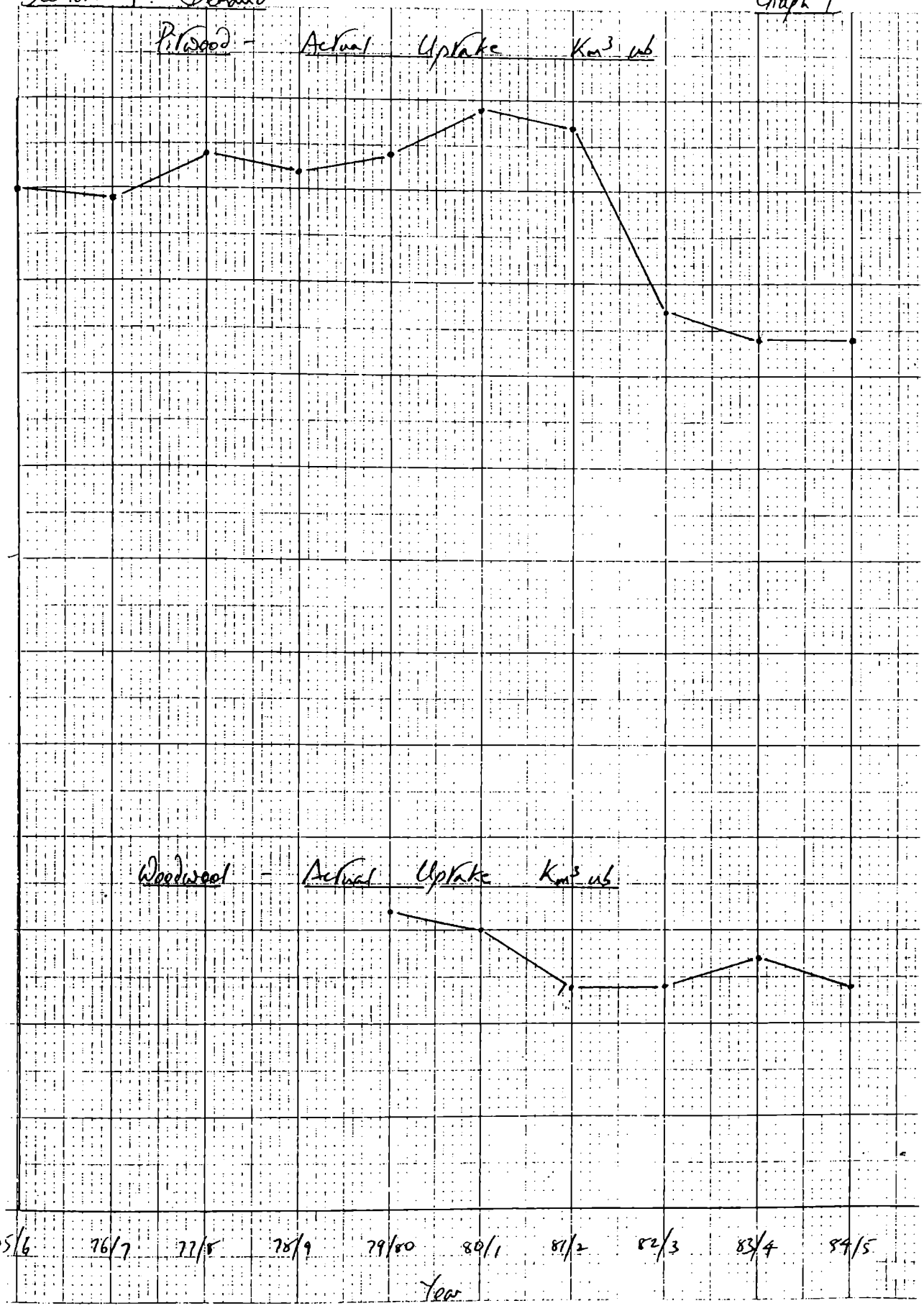
(2) From Sales Plan.

(3) U6/6/1 dated 30.6.85.

(4) UB = OB x 0.85

Section 4. Demand

Graph 1



5. Input

From section 2 above, it is evident that the predicted increase in depot throughput has not occurred. More particularly the level of cambio input has shown a steady decline over the last five years, from 28% in 1981/82 to a forecast 15% in 1985/86. This is due both to a decrease in volume of early CP thinnings becoming available (see below), as well as disposals of prime cambio production areas (eg. Lynn blocks). (Graph 2)

Period	CP Thinning volume (Km^3 OB)(1) 7-14 cm td
1983-86	20.8
1987-91	17.9

Moreover, reservations must be expressed as to the medium term availability of cambio material, in view of low stocking densities evident in many second rotation crops. This will have the duel effect of delaying time of first thinning and producing poles of poorer (heavier side branching) form (see below). Although stocking densities are being increased as from 1985/86, the problem of reduced cambio availability will remain for several years.

Year	Input (Km^3 OB) (2)						
	Long Butts	%	Cambio	%	Smallwood	%	Total
1981/82	29.2	70%	11.4	28%	0.8	2%	41.5
1982/83	30.4	72%	10.8	26%	0.9	2%	42.1
1983/84	36.6	75%	10.9	22%	1.5	3%	49.1
1984/85	30.1	74%	8.5	21%	2.1	5%	40.7
1985/86 (forecast)	40.7	83%	7.1	15%	1.1	2%	48.9

This shortfall in cambio material could be made up by importing supplies from other Forest Districts, but there is only limited scope for substituting material of a different specification (ie. long butts), in view of NCB prop/split top diameter requirements.

Total forest production in 1989 was estimated to be $243km^3$. This is likely to be an overestimate in the order of $100km^3$.

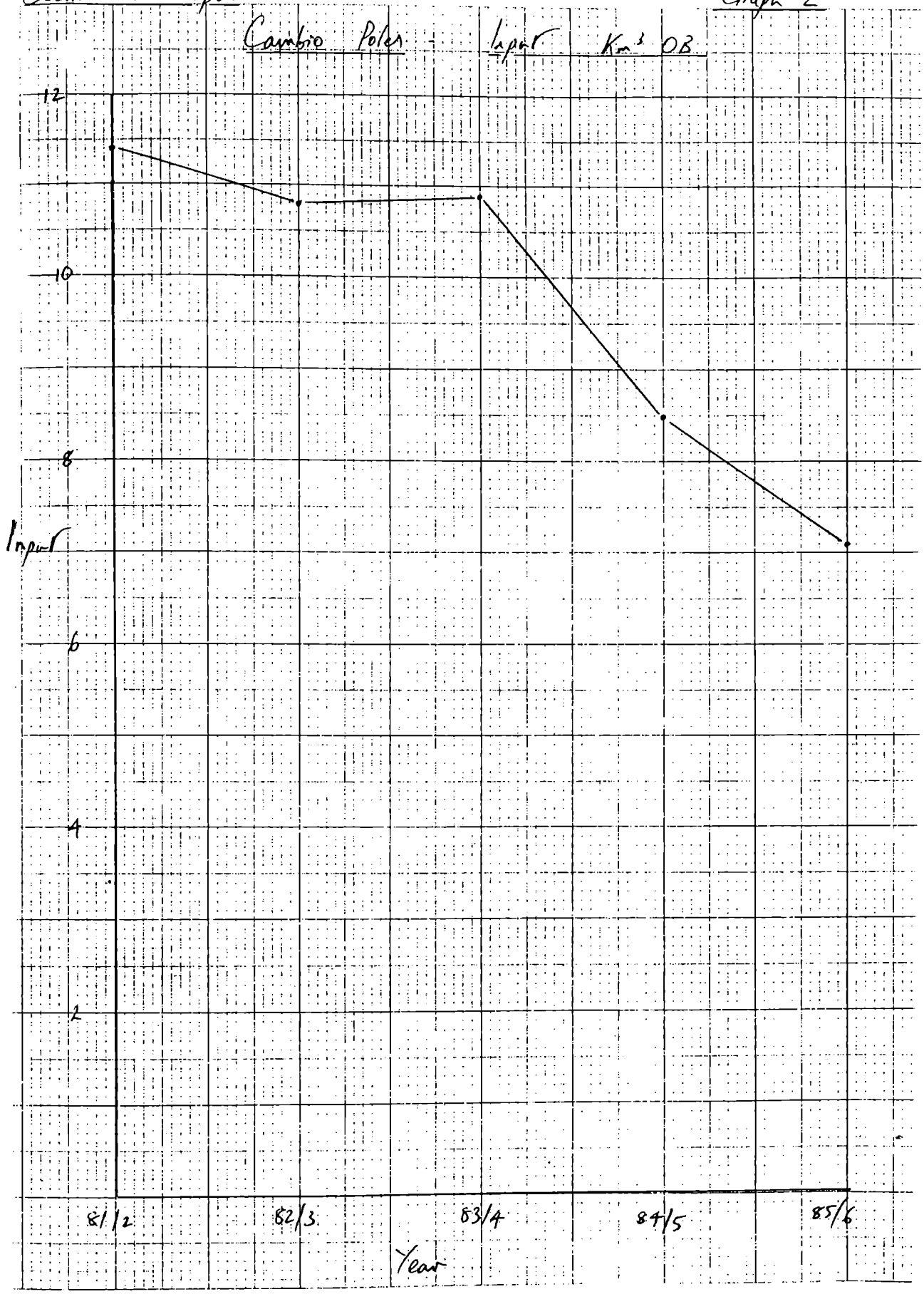
(1) Special Forecast of Production - Category 'Residue' Pines, (vol to 7cm top diameter) - (vol to 14cm top diameter).

(2) BCD monthly input figures.

Section 5 Input

Graph 2

Cambio Poles - Input Km² OB



6. Profitability

The Internal Rate of Return method is appropriate for appraising whether or not a particular course of action is justifiable. Having taken that decision (in this case to redevelop BCD) a more appropriate yardstick of performance is current cost accounting. Since 1981, a trading account has been used to monitor profitability.

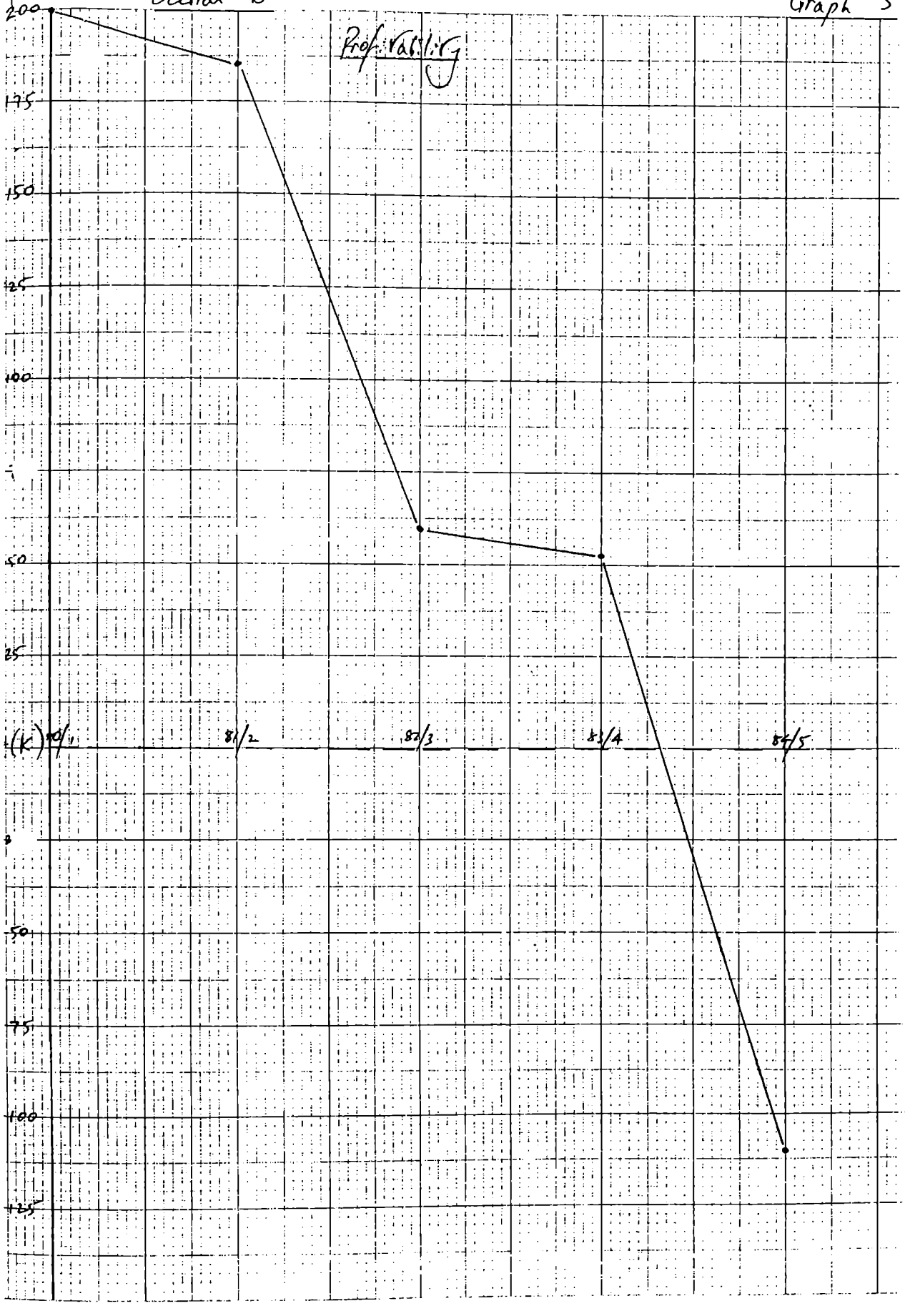
Year	Expenditure (£K)	Income (£K)	Surplus (£K)	Surplus excluding Higher Overheads & Interest (K)
1984/85	1345.5	1234.5	- 111.0	- £111.0
1983/84	1552.9	1605.4	52.5	£ 52.5
1982/83	1516.9	1577.3	60.4	£ 60.4
1981/82	1620.5	1724.7	104.2	£186.5
1980/81	1671.2	1775.2	104.2	£199.2
1979/80	1585.1	1429.2	- 155.9	- £ 57.8

The table above shows that profitability (as measured by the trading account yardstick) moved from deficit to surplus from 1978/79 to 1980/81. From 1982 onwards, profits decreased gradually, showing a negative surplus in 1984/85, reflecting the depressed state of pitwood markets. (Graph 3).

Section 6

Graph 3

Prof. Valuing



/. Conclusions and Recommendations

The above investigation has drawn attention to some of the differences between Working Party predictions and actual outcome, together with an attempt to explain reasons for disparities. In arriving at recommendations for the future many factors have to be considered and certain assumptions made.

1. BCD plant is geared specifically for pitwood and woodwool production. There is therefore no scope to exploit sawn wood markets. There may be potential for "rounded" products (eg childrens play frames/furniture) but this would require further capital investment.

Assumption 1

Further major capital expenditure on value-adding equipment at BCD is unlikely.

2. Data trends over the last 5 years, combined with evidence of pit rationalisation in the coal mining industry, suggest that demand for pitwood and woodwool will not increase significantly within the near to medium term future.

Assumption 2

Demand for the major products (pitwood and woodwool) will remain static at around 30km^3 ub per year.

3. Demand from the trade for all forest products is buoyant and competition is generally keen. There is no anticipated problem in disposing of BCD material to alternative markets (eg pulpwoods, chipwood, fencing or sawlogs). Thetford Forest District is on a declining production curve in the short to medium term.

Assumption 3

Supply to the depot will not increase significantly beyond 50km^3 ob during the short to medium term future.

4. There is little scope for reducing the fixed cost component of expenditure (particularly VME). Overall efficiency (output/worker) and profitability (income minus expenditure) can thus only be increased by reducing the wages element of expenditure.

Given these conclusions, the following recommendations are made:-

1. An incentive scheme be introduced at the earliest opportunity.

2. Staff levels be reduced by one third to approximately 30.

It is suggested that there are two further unpalatable options which have not been considered in this analysis, namely sale of the enterprise or complete closure.

Compiled by Assistant Forest District Manager

J F Ogilvie
26 November 1985

APPENDIX 11o

...: U11/5/1

Thetford Forest District
Santon Downham

3 October 1984

BRANDON CENTRAL DEPOT - BOARD OF MANAGEMENT

Minutes of a meeting held at Forest District Office, Santon Downham on Friday 21 September 1984 at 9.30 am.

Present:
Mr L M Simpson - Chairman
Mr B Griggs - District Forester, BCD
Dr A L Bushell - External adviser
Mr R Varney - Secretary

Chairman welcomed Dr Bushell to the first Board meeting.

Apologies for absence were received from Mr Dinning.

Agenda

1. Terms of Reference

Chairman read out the Terms of Reference issued by Conservator and approved by Headquarters.

The following observations were made:

a. Dr Bushell would be advising on the form of financial accounting on the Trading Account.

b. The target return on capital of 5% in real terms was appropriate.

c. Dr Bushell felt that Treasury would refer to the original 1979 appraisal as a base point but would also look at subsequent developments.

d. The constraint of no further significant capital investment was noted. As far as the reducing national NCB pitwood requirement was concerned it was thought that BCD would obtain an increased share of the market. It was felt that the current trading account did not accurately reflect the viability of the depot. Dr Bushell agreed that the Depot was not run on a truly commercial basis but he would attempt to produce a form of accounts which would meet the approval of all concerned.

Chairman said that it was Commission policy not to enter into fields of the timber industry other than roundwood production. Therefore the production of squared timber through a fully fledged sawmill would not be envisaged at the Depot.

As far as performance indicators were concerned, Dr Bushell would only measure the quantitative areas and not concern himself with any social problems which may arise as a result of decisions taken to improve viability of the Depot.

e. Chairman concluded that the Terms of Reference may have to change in the light of circumstances.

2. Future Action Programme

Dr Bushell referred to his proposals as per his letters to Mr Dinning dated 23 February 1984 and 28 May 1984. The first was primarily his initial outline of timetable of events. He saw his contribution falling into two capacities viz. Board meetings and site meetings with Depot manager at an operational level. Meetings should not necessarily be restricted to the timetable.

The second letter outlined Dr Bushell's management programme following a meeting with Mr Griggs at the Depot.
Overall the plan was to establish:-
Available resources; what strategies were suitable for BCD to maximise profit; consider the degree of risk and investigate markets and availability of supply. Once strategies established, study people and communications and ensure that new system was maintained.

The nine points of Dr Bushell's programme were discussed and agreed. The following points were made:-

a. The strategies required to close the gap between production requirements and market forecast must be realistic; no purpose served in striving for the ubobtainable.

b. Improved marketing and promotion required. Chairman advised that FC staff were trained to control unit costs but did not see overall costs or income.

c. Financial ratios could be used as control system$ to which would be quickly and easily understood. Information would be sent to the manager fortnightly or monthly. Quarterly reports extrapolated for forecasting would also be prepared. Essential for manager to have knowledge of income as part of the cash flow.

d. Mr Griggs would inform Dr Bushell of what information was presently available to use as a starting point.

e. Dr Bushell stressed the need for a control system to oversee the management plan.

3. 1983/4 Trading Account

Chairman presented Dr Bushell with a copy of the draft 83/4 Trading Account together with amendments prepared by Mr Griggs. Dr Bushell undertook to study the information. He felt that quick reports rounded to the nearest % would be suitable for local managers.

4. Operator Earnings and basis for incentive payment

Chairman said that Work Study had been involved in rate setting and an approach to the workforce over incentive payments by local management was to be made. However, it was agreed that the matter would be fully discussed at Board level before presenting the case to them. Conservator did not wish to delay the introduction of the scheme but Dr Bushell said he would require some time to appraise the setting up of such a scheme and its affects on productivity.

5. Any Other Business

Dr Bushell said that he would, in consultation with Mr Griggs, consider what needs to be done as per the plan of action and how to achieve it. He felt that a sensivity analysis would be necessary and he would prepare 8 to 9 questions which would need to be answered. Further information may be required from sources other than Mr Griggs Dr Bushell requested copy of the original 1979 project appraisal.

6. Date of Next Meeting

Friday 26 October 1984 at 9.30 am (Board Meeting)

Friday 28 September and Friday 12 October 1984 (Site meetings at BCD)

There being no other business the meeting closed at 12.30 pm.

Mr Griggs BCD

Ref: U11/5/1

BRANDON CENTRAL DEPOT - BOARD OF MANAGEMENT

Minutes of a meeting held at Forest District Office, Santon Downham, on Friday 26 October 1984 at 9.30am.

Present :	Mr L M Simpson	-	Chairman
	Mr M Dinning	-	Asst Conservator H&M
	Mr B Griggs	-	District Forester BCD
	Dr A L Bushell	-	External Advisor

Please return.

	ACTION	INFO.	INIT.
CF		✓	BL
FOR.		✓	RAH
P'MAN		✓	✓

Chairman welcomed Mr Dinning to his first Board meeting.

Apologies were received from Mr Varney.

Agenda

1. Minutes of previous meeting.

These were agreed as a true record.

2. Matters Arising

1.c Mr Dinning brought to attention the comments of Mr Bradley in the HQ (H&M) Audit Report, that the commercial trading account, incorporating 'good customer discount' and a return of 5% as the key factor, was more important to management decisions than any reconstructed IRR appraisal.

1.d Mr Dinning pointed out that the current BCD equipment would enable part sawn timber to be produced eg. gate posts, and the boundary between roundwood and squared timber was fairly flexible. NOT SO WITHOUT MODIFICATION & IMPROVEMENT - & RACK BENCH

2.b As from 1 April 1985, income returns will be made available. Dr Bushell stressed that it was important to know the debtors.

3. Mr Dinning presented a new set of 1983/84 Trading Accounts which had been revised for 'Stocks and W1P'. These were discussed in some detail and the principles explained to Dr Bushell. The price 'Analogues' were explained and it was agreed that the trading position is very sensitive to the transfer price paid by BCD. Is 7½% a correct discount rate ?. Mr Simpson agreed to update Appendix I. Mr Dinning defined PDC rates and how these could be varied during the year. A meeting at BCD will be arranged for Dr Bushell with Mr Maiden (CME). It was noted that High Overheads was a major contributor to the Deficit and the services provided by HQ were discussed. COMS. & DIST. NOT EXCLUDED.

3. Progress Report

Dr Bushell confirmed that he had two meetings at BCD with Mr Griggs since the last Board meeting and together with the literature he had read eg. Annual Report, he felt he was now in a position to make reasonable comments on at least the financial accounting side. In the near future a good look at the marketing side would be necessary. Dr Bushelll considered it necessary to set up a system to give local management a more rapid and regular return of information on profitability to enable trends to be spotted and action to be taken. He suggested this should be done on a running review period of

monthly, quarterly, annual. with rolling 12 months.

three months and also at twelve months for a yearly comparison.

Dr Bushell presented a series of input documents as a guideline for a future management information system for BCD and these more fully discussed. Deadline dates for this information were critical but Mr Griggs was hopeful that 75% of the data required would be available within three days of the end of a period. Sales data to be based on the despatched figures. Problems of measurement convention and reconciliation were also discussed. Mr Griggs will supply Dr Bushell with a list of current accounting periods. Mr Griggs agreed to try and complete the trial input documents based on the current ~~quarter~~ month ending in time for Dr Bushells next visit to BCD.

4. Any Other Business

a) the value of a computer for simulation exercises was briefly discussed.

5. Date of next meeting

Wednesday 12 December 1984 - 9.30am at Santon Downham.

Mr Griggs BCD

Ref: U11/5/1

Thetford Forest District
Santon Downham

10 December 1984

BRANDON CENTRAL DEPOT - BOARD OF MANAGEMENT

Minutes of a meeting held at Forest District Office, Santon Downham on Wednesday 5 December 1984 at 9.30am.

Please return.

	ACTION	INFO.	INIT.
CF		✓	BG
FCS		✓	PAH
FMAN		✓	✓

Present : Mr L M Simpson (Chairman)
Mr M Dinning (Asst Cons H&M)
Mr B Griggs (District Forester BCD)
Mr J Maiden (C.M.E)
Dr A L Bushell (External Advisor)
Mr R Varney (Secretary)

Chairman welcomed Mr Maiden to his first meeting.

Agenda

1. Minutes of previous meeting held on 26 October 1984

These were agreed as a true record subject to the following;

Item 2.3 - last sentence, delete 'high', insert 'higher'.
Item 3 - last sentence at bottom of page, insert 'monthly and'after 'running'.

2. Matters Arising

No matters arose from the previous minutes.

3. Progress Report

Dr Bushell had 2 working meetings at BCD since the last Board meeting. He had devised input documents for a proposed management system using headings from the annual accounts and Mr Griggs had produced rough drafts with completed data for the meeting. This was done to test the ability to provide the information as quickly as possible after the end of the monthly and quarterly periods including the rolling figures.
The five documents were discussed and the following comments made;

1) B.C.D Purchases (at end of October 1984)

Information fairly easy to produce but it was agreed that it was essential to use the most up-to-date prices. Mr Griggs had used the current price index which was updated twice yearly following the log auctions.

2) Work in Progress

Information easy to produce.

3) Finished stock evaluation

As previous figures were not available a zero change was assumed from the previous period. The form showed, for example, that there were 20 weeks of woodwool unsold because of slow uptake by the buyer which represented a large value to have on stock.

4) Sales Analysis

Mr Griggs had set up procedures to produce figures based on despatch sales for the table but it had proved time consuming to prepare. The problems of 4 and 5 week months were discussed but Dr Bushell thought these would be overcome once the system was established as the running quarter always consisted of 13 weeks. ? No problem as quite a normal procedure.

5) Profit Account

This table used the information from the other documents but Mr Griggs had experienced difficulty in supplying the information because of late submission of the FC 32. The exercise had taken 2½ to 3 days but he felt that as the system was developed this could be reduced to 1 or 1½ days, without the aid of a computer. The information used was already available and it was just a matter of presenting it in a different format.
Dr Bushell said the value of the system would be apparent as trends developed over a period of time. Mr Dinning felt that the greatest value was in displaying information in money terms as opposed to programmes. Dr Bushell suggested quarterly Board meetings with the progress reports available 10 days to 2 weeks after the end of the period in question. Mr Griggs said this could be achieved but the preparation of the profit account table was dependent on timely submission of the FC 32. He added that he was satisfied with the way in which the tables were presented but emphasised the staff time required in producing them.
It was agreed that footnotes were required to explain the breakdown of the wages element and Dr Bushell would redraft the form.
Dr Bushell thanked Mr Maiden for his explanation on VME accounting at their previous meeting. Whilst it was agreed that the VME charge on the profit a/c was an appropriate charge to make it was felt there was an element of overcharging which would need to be investigated.
It was generally agreed that the budget figures on the profit a/c were unrealistic because of the imposed cuts at the beginning of the year.

4. 1983/84 Accounts

Dr Bushell had studied the revised accounts and would give his detailed comments on their presentation at the next meeting. He said that interest charges did not normally appear on Trading accounts and he felt that the VME interest charges seemed to be a ficticious element.

5. Marketing - Outlets and Scope

Dr Bushell had examined the current list of major products and customers and had concluded that the only area of expansion was in fencing. He thought there was opportunity to diversify and exploit the smaller home based cottage type industries which produced wood based products. It was felt that more aggressive marketing was required in the form of advertising and Dr Bushell recommended that this be done after Christmas. Mr Griggs agreed as long as management were prepared to supply the necessary resources. Mr Dinning said that the wage bill was strictly limited and no further recruitment would be allowed but increased efficiency in the Depot may throw up surplus manpower which could be utilised if alternative markets developed. Mr Griggs said that to some extent knowledge of BCD and its products was becoming widespread by word of mouth because of the increased local cash sales market. The meeting agreed that it was unwise to be dependent on one major buyer eg. NCB and the current coal dispute was obviously causing concern. Mr Dinning said a larger pitwood order was anticipated because of the closure of one of the FC's depots in Yorkshire but he felt that the overall demand for mining timber would decline as more uneconomic pits were closed. It was generally agreed that there was a strong case

for diversification of products and Dr Bushell would prepare by the next meeting a test marketing plan for post, stakes and rails.

6. Computerisation of B.C.D.

The report by Mr Spence was generally discussed. Dr Bushell said that it was essential that any new system should provide the information required by the Board as well as F.C requirement for budget control and accountability.

7. Any Other Business

In response to Dr Bushell's enquiry about his position as external advisor to the Board, the meeting agreed to the continuation of his contract up to the end of the Financial Year viz 31 March 1985 when it would then be reviewed.

8. Date of Next Meeting

Wednesday 23 January 1985 - 9.30am at Santon Downham

Mr Griggs, BCD

Ref: U11/5/1

Thetford Forest District
Santon Downham

28 January 1985

BRANDON CENTRAL DEPOT - BOARD OF MANAGEMENT

Minutes of a meeting held at Forest District Office, Santon Downham on Wednesday 23 January 1985 at 9.30am.

Please return.

H&M)	ACTION	INFO.	INIT.
C/F		✓	
FOR.		✓	RAU
F'MAN		✓	

Present: Mr L M Simpson (Chairman)
Mr M Dinning (Assistant Conservator)
Mr B Griggs (District Forester BCD)
Dr A L Bushell (External Adviser)
Mr R Varney (Secretary)

Agenda

1. Minutes of previous meeting held on 5 December 1984.

Agreed as a true record subject to the following:-

Item 5 - penultimate sentence - delete whole sentence and insert "Mr Dinning said a larger pitwood order was anticipated because of the possible closure of the FC's depot in Yorkshire but that the overall demand for mining timber would decline as more uneconomic pits were closed."

2. Matters arising

Item 6 - Computerisation of BCD - this matter was discussed under item 7 - Any other business.

3. Progress report - Dr Bushell

Dr Bushell presented the meeting with a paper which set out his comments on the 83/84 trading account. He felt that the 3% interest charge was reasonable and the VME charge was realistic following his discussions with CME. He thought that for the future more emphasis should be given to marginal costing which would mean a revaluation of the stock. He concluded that the form of accounts currently used were fair and reasonable although, like Mr Dinning, he would query the calculation of the higher overheads. These meant a nett deficit of £34.4k which represented approximately 5% of timber costs.

Dr Bushell had examined note 7 (Work in Progress) to the revised accounts and discovered errors in the figures which meant his trading account paper would have to be modified relating to the amount of interest charge.

Mr Dinning undertook to finalise the 83/84 accounts and submit them to HQ.

Dr Bushell presented his second paper to the meeting which set out a marketing plan for posts, stakes and rails (PSR). This indicated that sales of PSR need to be doubled in order to make a signifcant contribution to the depot's profitability. If this were to be achieved, this would put PSR on par with woodwool and Coal Board products.

Mr Dinning was concerned that sufficient resources would be available eg. raw material to meet increased sales and Mr Griggs said it was essential that whoever did the selling promotion of PSR understood the implications for the depot. Dr Bushell said he was more interested in seeking out those potential customers who were likely to set up in their own businesses rather than the general retail trade and said we should be prepared to assist and advise such people as much as possible. Mr Dinning was delighted to try this approach as long as we could ensure that we could cope with the increased demand as continuity of supply would be of paramount importance.

Griggs felt that business was generally expanding in any event with new customers coming regularly.

It was felt generally that any promotional drive to advertise PSR should be deferred 3 to 4 months in order to allow the marketing situation reach a more normal situation as far as NCB production was concerned.

4. Local management control sheets

The meeting examined the sheets available for October, November and December 1984. Dr Bushell pointed out an error on the November WIP and profit account sheets which when corrected meant the surplus was lower and the running surplus was negative. Dr Bushell also queried the recommended selling price of PSR which was lower than the stock valuation figure. It was agreed that this was due to the product mix. Mr Dinning said it was essential to have footnotes on the forms to show what prices and indices were being used.

Mr Griggs said that it had proved a much quicker exercise to lift the FC32 figures for the December table 5 (Profit account) compared with his first attempt for the October return.

The latest figures on the control sheets were briefly noted by the meeting. The profit account showed a surplus of £14.5k mainly due to the increased WIP. The running quarterly surplus stood at approximately £2k. Dr Bushell felt that the sales analysis sheet had reached saturation point with figures and needed redesigning. Both Dr Bushell and Mr Dinning agreed that the control documents gave a much better insight to the Depot's performance.

5. Timber input valuation

Mr Simpson presented a paper relating to valuations of different categories of timber for the 84/85 accounts. The information required revision due to changes in the log categories at February 1984 and Mr Simpson said that a revised analogue would be prepared by Mr Ogilvie.

6. New incentive payment system

Mr Simpson said that Work Study had produced a draft output guide but nothing could be negotiated until the pitwood situation had returned to normal. It was agreed that Dr Bushell should be sent a copy of the draft output guide under confidential cover.

7. Any other business

Reference was made to Mr Spence's report on the computerisation of BCD. Mr Griggs said that the proposed system consisted of five files of information none of which could be processed for the preparation of the local management control documents. Dr Bushell said it was important to investigate and clarify management requirements before any computer was installed so that appropriate programmes/software etc could be designed to suit our needs. The meeting agreed that Mr Pritchard of Computer Branch HQ be contacted at an early date to obtain further details.* Dr Bushell would present his comments on the proposed computerisation for the next meeting.

* In order to put Dr Bushell's views Dr Bushell also expressed a wish to be involved in discussions regard ing software and hardware hardware.

8. Date of next meeting

Thursday 21 February 1985 - 9.30am at Santon Downham.

Mr Griggs BCD

Ref: U11/5/1

Thetford Forest District
Santon Downham

28 February 1985

BRANDON CENTRAL DEPOT - BOARD OF MANAGEMENT

Minutes of a meeting held at Forest District Office, Santon Downham on Thursday 21 February 1985 at 2pm.

Present: Mr L M Simpson (Chairman)
Mr M Dinning (Assistant Conservator H&M)
Mr B Griggs (District Forester BCD)
Mr M Pritchard (Computer Branch HQ)-item 4 only
Dr A L Bushell (External Adviser)
Mr R Varney (Secretary)

Please return

	ACTION	INFO.	INIT.
C/F		/	
FOR		/	
F'MAN		/	

1. Minutes of previous meeting held on 23 January 1985

Agreed as a true record.

2. Matters arising out of the minutes

Item 6 - New incentive payment system.

Dr Bushell had read the Work Study report and enquired what sort of response was expected in qualitative terms. Mr Griggs said this was difficult to assess with the coal dispute still having an effect. He had compared standard times with actual times for the mill and found that standard time was 83% of actual time which he felt was about right. More comparisons for the peeler were necessary due to the recent bad weather. Mr Griggs confirmed that incentives were necessary to achieve the throughputs required based on a NCB requirement next year of 33000 metres.

Mr Simpson asked if this was the type of incentive scheme we should be aiming for. He felt that the price per standard minute based on 128% incentive level fully motivated the men in the forestand an incentive formula on a similar basis should apply to the Depot. Mr Griggs said that factory type conditions applied to the Depot rather than Forest Worker situations and thought the workforce should be paid on the amount of timber peeled and sold through the gate, although he felt this would not be negotiable with all concerned.

Dr Bushell warned that incentive schemes should not make service operators too efficient at the expense of production line operators. Any scheme must be seen to be a pool effort. Hat said need to leave some slack for contingencies

In response to Dr Bushell, Mr Dinning said the next step was to wait until the coal dispute was settled before negotiations took place. Mr Griggs felt that it would take approximately six weeks after the settlement before the Depot returned to normal.

Item 5 - Timber input valuation

In response to Mr Dinning, Mr Simpson said that Mr Ogilvie had not yet produced the revised analogue, but the work was in progress.

Main Agenda

3. Local Management Control Sheets

The controls sheets up to January 1985 were discussed in turn.

Sheet 1 - Purchases - Input down mainly due to restriction on forest earnings. This meant a greater stacking space. Dr Bushell thought the form needed revising now that trend information was coming through.

Sheet 2 - W.I.P Negative figure for January W.I.P indicated that budgetted W.I.P was less than actual W.I.P. Dr Bushell commented that the figures were very similar to the previous month.

Sheet 4 - Sales Analysis - Similar problems with running quarterly periods out of phase with FC accounting periods were noted. In response to Mr Simpson, Mr Dinning said it would not be possible to reconcile the new income printouts with the information on the sheet.

Dr Bushell said that the lower price per length was due to the pitwood situation and if the incentive scheme was introduced then this figure would have to be revised. Mr Griggs said that the best cutting pattern was achieved by paying by linear measure.

Sheet 5 - Profit Account - Dr Bushell considered the figures were very satisfactory and showed that when the pitwood situation was back to normal then profitability should increase. Mr Griggs said this was dependent on the increased throughput in the mill. There was also the problem of coping with the proposed doubling of PSR output should pitwood return to normal.

Mr Dinning asked if the sheets could be finalised at the next meeting and if a manual on how to use them could be prepared. Dr Bushell undertook to tidy up the sheets and include notes on how to interpret them. Dr Bushell asked if there was an average figure of output per week which would give some indication of movement especially when the incentive scheme was working. Mr Griggs said that there were two criteria involved - the volume peeled and the volume converted in the mill including wastewood. Linear length was available if required.

4. Computerisation of BCD

Mr Simpson welcomed Mr Pritchard to the meeting and introduced him to the other Board members. He then asked Mr Pritchard for his comments on the possibility of input for the preparation of the control sheets and Mr Spence's report.
Dr Bushell firstly explained to Mr Pritchard his remit to the Board and how the control sheets worked.

Mr Pritchard said that the use of computers at BCD was in the very early stages of thinking and the FC were very reluctant for one off developments. He required a comprehensive statement of requirements before needs could be assessed. This would entail quantification of benefits, costs from both sides and monitoring of achievements if any. Mr Dinning reminded him that the overall development of the depot had been sanctioned by HQ and that the use of computers had been emphasized during the Director's H&M visit to the depot last year - Mr Simpson expressed concern at the apparent lack of progress and Mr Pritchard undertook to pursue the matter further at HQ. He added that his main problem was the lack of manpower resource in Computer Branch. He felt that standard software packages would cope with the depot's requirements and could be handled possibly by the computer to be installed initially for payroll purposes. He thought there was scope for the use of spreadsheets and cash flow projections but, as Mr Spence's work was just ideas and not programmes it would take time to build the systems.

Dr Bushell said it was important that management was seen to dominate computer systems rather than the other way round.

Mr Pritchard took note of the Board's views and agreed to refer the data/evidence to Mr Atkins at HQ for him to carry out a cost benefit exercise.

5. Any other business

There were no other matters to discuss.

6. Date of next meeting

Tuesday 2 April 1985 - 9.30am at Santon Downham.

BRANDON CENTRAL DEPOT : BOARD OF MANAGEMENT

Minutes of a meeting held at the Forest District Office, Santon Downham on Wednesday 3 April 1985 at 9.30am.

Present :	Mr L M Simpson	(Chairman)
	Mr M Dinning	(Operations Manager E(E)
	Mr B Griggs	(District Forester BCD)
	Dr A L Bushell	(External Advisor)

1. Minutes of previous meeting held on 21 February 1985

Agreed as a true record.

2. Matters arising out of the minutes

Item 2.6 - New incentive payment system : Mr Griggs stated he wished to calculate more theoretical comparisons and Mr Dinning's view was that there should be no introduction until following the NCB visit on 24 April.
To clarify, any incentive scheme for service operators must also allow for their machines doing 'other' work.

Item 2.5 - Timber input valuation

Mr Dinning considered there was no need for assistance from Mensuration Section, as requested by Mr Ogilvie in correspondence, and this was agreed. Top diameter and length samples from Cat II logs at both BCD and in the Forest will be measured by local staff (student project).

Item 4 - Computerisation of BCD

Following discussions last week with the Conservancy Liaison Officer, Mr Simpson understood the position to be that a computer would be delivered to BCD in time for training the operators at their work site. Mr Dinning said he would discuss training arrangements with Derek Davies and it was suggested that the CLO could possibly undertake the training. Dr Bushell confirmed that the 'Merlin' model was well suited to take the spreadsheet package. (Miss Shipp has since confirmed that because of her title role and responsibility she is unable to undertake training).

3. Management Control Schedules

Dr Bushell went through the final form of the individual schedules and with minor amendments these were accepted as suitable for current local management needs. The data for the p.e. 3 March was looked at in detail.

1. Purchases - Reflected pattern of imposed changes in forest working due to weather and ceiling on earnings.

2. Work in Progress - Values have remained fairly constant. It was considered that 24 weeks stock was perhaps high but this did permit good drying and resulted in lower haulage cost.

3. Finished Stock - Significant decrease in overall stock holding but adequate for the 'best buys'.

4. Sales Analysis - Sawlogs down but the weather situation during the previous period had ~~exploited this~~. resulted in extraordinary sales.
On PSR, sales significantly down and now hitting a lowpoint in the cycle of the wholesale market. It was encouraging to now see pitwood sales rising with a 20% growth rate since the first management information shedule in October.
Seasonal variations in markets were discussed and Mr Griggs confirmed with regard to NCB orders that details could not be forecast beyond the ~~next~~ current quarter periods.

5. Profit A/C - material was being drawn from stock to support sales. Measurement conventions were discussed and Mr Griggs cited an example of current value loss due to differences between peeled stock and converted stock (NCB conventions).

   Dr Bushell demonstrated 'condensed reports' to give an overall management view through a graph display showing 'Average Weekly Sales & Costs',and a table adjusted for weighting of different numbers of weeks in the reporting periods. It was agreed that these would be a valuable additional management aid and Dr Bushell would formalise these report presentations.
   Dr Bushell showed an example of spreadsheet printout produced by computer from existing BCD data input schedules and confirmed the ability of the 'Merlin' model to produce such managements aid as routine procedure.

4. Review of Consultants Contract

Following discussion it was agreed that this was a convenient time to terminate Dr Bushell's contract as the regular 'External Advisor'to the Board. Dr Bushell confirmed that he would be available for periodic consultation when required by the Board as threshold problems arose eg. availability of management information following installation of computer at BCD, introduction of new incentive schemes, marketing. All members of the Board thanked Dr Bushell for his constructive efforts since conception of the Board and the refreshing views and insight he had contributed to current problems. Dr Bushell wished recorded how much he had enjoyed working with the Board and the interesting new challenge he had been faced with. He looked forward to being of further future assistance to the Board.

5. Date of Next Meeting

This was later agreed as Thursday 9 May 1985 - 9.30am - at Santon Downham.

Mr Griggs, BCD

Ref: U11/5/1

Thetford Forest District
Santon Downham

14 May 1985

BRANDON CENTRAL DEPOT - BOARD OF MANAGEMENT

Minutes of a meeting held at Forest District Office, Santon Downham on Thursday 9 May 1985 at 9.30am.

	ACTION	INFO.	INIT.
C/F		✓	
FOR.		✓	RAH
FMAN		✓	

Present: Mr L M Simpson (Chairman)
Mr M Dinning (Operations Manager E(E))
Mr B Griggs (DF BCD)
Mr J Ogilvie (Asst. FDM Thetford)
Mr R Varney (Secretary)

Mr Simpson welcomed Mr Ogilvie to his first meeting of the Board.

1. Minutes of previous meeting held on 3 April 1985

Agreed as a true record.

2. Matters arising out of the minutes

Item 2.4 - Mr Griggs reported that the computer had now been delivered and his two clerks were to be trained during early June.

3. Management control schedules

Revised schedules had been received from Dr Bushell but Mr Griggs had not been able to examine them. He would ~~compare~~ profile them with the April printout information and discuss them with Mr Simpson. The schedules for the period ended 31 March 1985 were looked at.

3.a. Purchases - the downward trend in input (64% of programme) continued with very low levels of stocks. It was felt this was due to lorry breakdowns and that organised felling meant fewer products than before. It was suggested a reduced input to the log auction to compensate the shortfall be considered and Mr Ogilvie agreed to discuss with Mr Marshall and report back to Mr Dinning as soon as possible.

3.b. Work in Progress - Mr Griggs said the figures needed adjustment because of inbuilt measurement conventions. He would draft a discussion paper to explain situation. (Action has now been taken).

3.c. Sales analysis - PSR continued to do well and pitwood had increased to 4 or 5 loads per day. Bark was down because of its unavailability. Uptake = production

4. Raw material analogues

Mr Ogilvie discussed his paper circulated 30 April and made some amendments to the volumes in the last table. The meeting agreed that Mr Ogilvie should carry out a sensitivity analysis to check the figures and then use them for the 84/85 accounts and again for the 85/86 budget.

The next Forest District H&M meeting should be informed that these were the most realistic analogues available and should not influence BCD input.

. Trading accounts 84/85

Mr Ogilvie had received figures from Mr Sell which he had had difficulty in reconciling. Mr Dinning said this was not normally done by Mr Sell until receipt of the FC48.

Mr Ogilvie presented his draft account which showed a £100K deficit and a big drop in income compared with 83/84. The deficit did not include higher overheads. It was felt that a healthy surplus would have occurred had the NCB uplifted all their contracted material.

Mr Ogilvie would contact Mr Sell to clarify figures.

6. Introduction of incentive payment system

Mr Simpson said this would depend on an increased NCB uplift following the end of the coal dispute. Mr Dinning had discussed the matter with the Conservator who had instructed that a new system of straight incentives based on output guides should be introduced for the peeler and mill. This to be an interim system pending further studies on transport which may lead to an overall bonus scheme. Discussions with the union would be necessary.

Mr Griggs asked that we await the NCB requisition (due shortly) for the next 3 months and if delivery rates exceeded those at present then there would be opportunity to introduce the new scheme which should be based on a calculated price per SM. Mr Dinning agreed and asked for proposals to be put forward in the next 2 weeks after comparisons had been made so that new scheme could be effected.

7. Timing of future meetings

Mr Simpson suggested meetings on a quarterly basis to discuss among other things, ~~to discuss~~ the trends and management information tables produced by Mr Griggs. This was agreed. Mr Dinning asked Mr Simpson to prepare a narrative for Conservator at the end of the June quarter.

8. Any other business

Mr Dinning read out a letter from NCB relating to their recent visit. NCB were proposing to introduce a new quality scheme and were asking FC and other suppliers to register but had given no written details of specifications, which concerned Mr Griggs. Mr Dinning considered that registration would be a wise move and that FC really had no option. He recommended that we agree in principle and would suggest to HQ that we proceed once full details were known.

NCB had also requested future use of lorries with hiabs for colliery deliveries as they often required to hire cranes for off-loading. This had been agreed already with one haulier on a one off trial basis. Mr Dinning asked Mr Ogilvie to approach 5 or 6 hauliers who had bid last time to check whether they had crane lorries and if they would be prepared to use them and what the effect on prices would be. Mr Griggs asked if we would expect hauliers to load as well as unload. Conditions of contract would have to state that the cranes be fixed to the tug of an articulated lorry so that trailers were available for loading.

The whole concept of this method of loading using a grapple would mean a fundamental rethink of stacking in the depot and stock control could also be affected.

9. Date of next meeting

Friday 2 August 1985 - 9.30am at Santon Downham.

BRANDON CENTRAL DEPOT - BOARD MEETING 2 AUGUST 1985

Minutes of the meeting held at FDO, on Friday 2 August 1985 at 9.30 am.

Present : Mr M Dinning (Operations, East England)
Mr J Ogilvie (Acting FDM, Thetford)
Mr B Griggs (DF BCD)

1. Minutes or previous meeting held on 14 May 1985.

Agreed as a true record.

2. Matters arising

Item 3a The suggestion of reducing input to the July sawlog auction to help compensate shortfall in BCD input was duly actioned. The original proposal for short sawlogs was reduced by half to 600m^3.

Item 3c Sales Analysis - The comment regarding unavailability of bark was not totally accurate. The firm level demand for bark resulted in lower stock levels than average at this time of the year.

Item 4 Raw Material Analogues - As minuted, the subsequent Forest District H&M Meeting was duly informed that the raw material analogues compiled following extensive measurements were the most realistic available, and that BCD input should not be affected in any way.

Compilations of a sensitivity analysis in the BCD analague exercise were not yet complete, this item was deferred until the next board meeting.

Item 5 Trading Accounts 1984/85 - The draft trading accounts for 1984/85 and 1985/86 had been duly submitted to Conservancy Office for comment and approval. A response is awaited in due course.
Mr Griggs then presented a comparison between the 1984/85 and 1985/86 analogues using 1985/86 sales plan volumes. This showed a difference in financial terms of £3362 per week. Mr Griggs stressed the point that the ~~high quality~~ (standard I large Dia category sawlog) element, was undesirable. A combination of restructuring the analogue and a general increase in analogue product prices, will cause an overall increase in product payment of £175K.

Mr Griggs then presented comparative data concerning proportions by volume of remaining NCB orders and pole stocks. This emphasised the present difficulty in reconciling product input with requisition specification. Currently stock of specification < 150mm totals 19.5%, compared with 87.4% NCB demand. It was agreed that Mr Ogilvie would stress the importance at the next H&M meeting of supplying cambio poles and if necessary short length poles (3.3m +).

3. Incentive Scheme - Progress

There then ensued a discussion concerning progress in introducing an incentive payment scheme at BCD. Discussion centred around basis of incentive payment, timing of introduction and anticipated effects on resource levels. It was agreed that, while the current uncertainty concerning NCB requisitions continued, and the current low stocking levels of cambio material continued, introduction of the incentive payment system would be deferred temporarily. Mr Dinning stated that specific proposals concerning the details of an incentive scheme should be prepared for the next Board Meeting.
Mr Griggs agreed to action this, (in consultation with Mr Ogilvie.)

Any other business

It was agreed that the new Suffolk FDM would be invited to visit BCD and discuss the possibility of potential cambio supply, in conjunction with Mr Mitchell, at a suitable future date.

Results of the Thetford re-survey were awaited with interest, particularly in view of suitability of stands for future BCD production. It was agreed that the results of this re-survey would be discussed at the next meeting.

5. Date of next meeting

Wednesday 6 November 9.30am. FDO.

J F Ogilvie (Acting Manager)
6 August 1985

BRANDON CENTRAL DEPOT - BOARD MEETING 6 NOVEMBER 1985

Minutes of the meeting held at FDO, on Wednesday 6 November 1985 at 9.30am.

Present Mr M Dinning (Operations East England)
Mr L Simpson (FDM, Thetford)
Mr J Ogilvie (Assistant FDM,Thetford)
Mr B Griggs (DF, BCD)

1. Minutes of previous meeting held on 2 August 1985

Mr Griggs emphasised that the undesirable component from the point of view of trading profitability, comprised not Standard I quality, but large diameter material.

Minutes agreed as a true record.

2. Matters arising

Item 4 Raw material analogues - in view of gradual changes to the nature of BCD input, it was agreed that a sampling procedure for determining Long Butt analogues would be implemented each year. Mr Griggs reiterated the importance of reducing input of Standard I Category sawlogs wherever practicable. The importance of colliery managers, in connection with autonomous decision-taking for each of the 140 (approximately) pits, was discussed.

Item 5 Trading Account 1984/85 - comment had now been received from Conservancy office on the draft Trading Account. A number of amendments were made to the original draft; queries on these points to be relayed to Conservancy office (Mr Dinning or Mr Scotney) by the end of November.

Discussion then ensued on the subject of price advantage to BCD in respect of the Trading Account. Mr Ogilvie suggested that the percentage price advantage currently enjoyed by Hopton Sawmill was considerably less than the 7½% factor built into the account at present. On the basis of 1985 data, Mr Ogilvie suggested that the correct figure was nearer 3%. However it was pointed out that a 9-month period was too short for realistic estimates and that a 3 to 5 year rolling average percentage should be calculated. Mr Ogilvie undertook to obtain data accordingly. *

Mr Ogilvie then presented a sensitivity analysis of the raw material analogue: this emphasised the unduly high weighting that the effect of Standard I logs has on index value, when compared with the other three components. On the basis of either analogue index value or roadside value, pulp has the least effect, followed sequencially by Merchantable logs,Standard II logs and Standard I logs.

3. Future supplies of round material

Mr Simpson mentioned that details of the Thetford resurvey were still awaited. These would be of great interest to the Board, particularly in respect of estimated future supplies of Cambio material. Future availability will affect the extent to which supplies have to be obtained outwith the Forest District. Mr Ogilvie undertook to obtain resurvey details as soon as these were available.

* Mr Griggs pointed out that B.C.D input is within control, measured as marked in the forest, not does any paperwork originate in the forest Control having an B.C.D weight- and weight-tickets supplied by BCD at no cost to the forest. This constitutes a significant difference in product and admin. costs compared with Sawlogs and surely justifies at least 50% of the 7½% discount allowed and probably more. BCD also pays for loading in that we are charged for haulage by Haulier Forms.

The subject of Suffolk Forest District supply ex-Lineage, was discussed. It was anticipated that a full time two-man chainsaw team would suffice, with extraction using South beat equipment (probably hydratongs). Set up Sat. Trial. Ring Jamon re Kent Inspected.

Mr Griggs outlined the current position with respect to peeling trials on Western Red Cedar. The success of input ex-Lineage, was obviously dependent on overcoming technical difficulties of peeling this material. If satisfactory, further potential supply could be made available from Wensum.

4. Labour requirements and incentive schemes

Mr Griggs outlined the current problems in staffing at BCD (absences/sick leave etc) with respect to work planning. Mr Dinning undertook to discuss the issue of a replacement for the Gremo With Mr Maiden.

5. Staff duties

The question of Mr Hoblyn's involvement in the RSPB Woodlark Project was discussed. Mr Griggs indicated that the time commitment necessary - 1 day per week - was too demanding on Mr Hoblyn's depot commitments, and queried the necessity for this. *

It was agreed that this matter would be raised with Mr Dannatt.

6. Any other business

Mr Griggs outlined the success of telepole peeling. The need to account for this operation in order to readily identify associated costs, was stressed. The exact method of basis of accounting would be decided by Mr Griggs in consultation with Mr Marshall.

Mr Griggs then relayed the results of the July to September quarterly reports to the meeting emphasising in particular the major improvement in woodwool uplift and continued improvement in pitwood deliveries with improved level of orders in the larger diameter classes. In particular, mention was made of the good achievement in average weekly sales total exceeding budget for the period ended 29.9.85, this situation not having arisen before.

Mr Dinning requested that the value of Mr Bushell's involvement be assessed. Mr Simpson undertook to action this.

7. Date of next meeting

Wednesday 5 February 1986 - 9.30 am. FDO.

* I queried Mr Dannatts letter to Dr Cadbury confirming 1 day per week which is not what I understood to have been agreed between F.D.M. Ass. Cons. Ops. and Rain + myself.

J F Ogilvie
for Forest District Manager
Thetford

19.11.85

We agreed that as much time as possible during normal working hours would be made available with any necessary balance being made up in Rain's own time with adequate recognition both a time outside working hours knowledge expertise + previous work It was agreed that 1 day per week would not be provided in the majority of weeks.

CONFIDENTIAL! PLEASE RETURN.

	ACTION	INFO.	INIT.
C/F		/	
FOR		/	
FMAN			

Ref: U11/5/1

Thetford Forest District
Santon Downham

13 February 1986

BRANDON CENTRAL DEPOT - BOARD OF MANAGEMENT

Minutes of a meeting held at Forest District Office, Santon Downham on Wednesday 5 February 1986 at 9.30 am.

Present: Mr L M Simpson (Chairman)
Mr M Dinning (Operations Manager E(E))
Mr N Dannatt (" " " elect)
Mr B Griggs (DF BCD)
Mr J Ogilvie (Asst. FDM Thetford)
Mr R Varney (Secretary)

Mr Simpson welcomed Mr Dannatt to his first meeting of the Board.

1. Minutes of previous meeting held on 6 November 1985.

Agreed as a true record.

2. Matters arising out of the minutes

Trading account 84/5 had been finalised and presented to Conservator for approval.

Mr Ogilvie presented a discussion document showing the price advantage enjoyed by Hopton over the last two years. Variables ranged between 1% and 8% over the 6 month periods and 5% was considered to be realistic. This advantage would probably be phased out at the end of the current contract. The matter to be kept under review. 7, I don't think any paper was present.

BCD material survey carried out by Forest Survey staff which was still being processed was discussed. Mr Griggs had doubts about availability of future supplies from Thetford although current inputs were 25% over Sales Plan. The possibility of using thuya as an alternative was being tested but would mean adjusting the configuration of the cutters in the peelers. This work could be done on a trial basis by Mike Edwards over a weekend.
Mr Ogilvie said the cambio input should be qualified. It was very good quality at present but future supplies may not be such a high standard. BG. The present situation demonstrates the scope that is available to maximise but agreed with J.O. that forest population changes renders less available.
Mr Dinning said there had been no developments on the Gremo/F.L. Money was in the 86/87 budget but the CME had been unable to select a suitable machine.

Mr Griggs said that Mr Hoblyn had selected his colleague for the RSPB Woodlark Project. This work would amount to 1 day per week but with staff absences at BCD, Mr Griggs doubted if pressure of normal work would allow this much time to be spent. He wished to know how Mr Hoblyn's time on the project should be allocated on the A221. Mr Dannatt said this project was at the request of the Commissioner and if the project couldn't be given full justice then he should be informed. Takes priority over 4-H, stated.

Telegraph poles - the cost of peeling was available. Mr Ogilvie had been approached by Calders and Grandidge Ltd with a view to storing fresh poles at FC risk at their premises.

3. Management Accounts - 29.12.85

The control documents for the above period were examined and Mr Griggs commented upon these. It was agreed that Mr Griggs should produce the quarterly narrative summarising the main points. for Quarter ending 29-12-85.

4. Budgets - future capital expenditure

Although the redevelopment was completed in 1983 it was followed by the miners overtime ban and year long strike. It was felt it was only now that full normal production of pitwood was being achieved. There was, however, a problem with the sorting of splits which required an extra four bays in order to produce a further two loads per week which currently went to woodwool. Mr Griggs had obtained a quote of £10,300 from Mike Edwards to carry out the work. This would increase profitability and make better use of manpower. figures presented.

Mr Dinning would discuss the matter with CME.

5. BCD - The future - Mr Ogilvie's paper

Mr Ogilvie presented his paper to the meeting as a discussion document. The following observations were made:

Section 1 - cost of development showed under 1% variance between actual cost and Treasury approved updated budget.

Section 2 - staff levels to be reduced to 29 to achieve projected outputs by working party. Concern was expressed about the calculation of efficiency on basis of volume sold - would it be better to compare with throughput or value sold? Mr Ogilvie undertook to investigate. Mr Griggs presented his paper of outputs from 82/83 to 85/86 showing unit costs and income.
* Increase apart from anything else - it includes addition of 17000 m^3 ex dump.

Section 4 - Sales Plan figures to be entered.

Section 5 - Insert 85/86 cambio % which would show the upturn.

Section 6 - surplus shows gradual fall from 80/81 to big drop in 84/85 due to miners' strike. The expenditure column to include write off of buildings etc.

Section 7 - Conclusions and recommendations. Reduce staff levels to 29 and abolish reserve crew of 9 and not have a swing line. Savings on wages element was only option because input and demand could not be increased.

Mr Griggs said the depot would not work without the reserve crew capacity which was essential to cover for leave, sickness etc. The depot could not refuse to fulfil NCB orders because of manpower problems, ~~and in any event~~ our competitors were gearing up to produce NCB requirements.

Mr Dannatt asked why the depot could not meet its assumed target throughput of 70k m^3 and Mr Griggs undertook to prepare information and try to have ready before Commissioner visit.

It was agreed that Mr Ogilvie would redraft his paper taking into account the views expressed at the meeting and Mr Griggs would produce a paper on the throughput per hour based on the initial design and projected outputs.

6. Visit of Commissioner)
7. Work Study Involvement) Not discussed as separate topics.

9. Customer weighing

The problem of providing weighbridge service for customers who were not charged for this service was discussed. It was agreed that Mr Simpson should talk to the merchants involved at the February auction before any decision was made. Mr Dannatt felt that a charge should be made.

9. Any Other Business

Mr Griggs made the following comments:-

Computerisation - S Atkins (HQ) was to visit to discuss new systems. Plans to be drawn shortly

Office extension - this to be included in 87/88 budget, ~~the information~~ was ~~due now~~.

Staffing - the Commission had said that a younger workforce was required at the Depot but there were still several over the age of 60 who tended to have more sick absences. and so some have come from the forest where there are no longer required
Staff inspectors' report was still awaited.

Mr Ogilvie said that he and Mr Griggs had been to the Work Study trial on the Nokka processor. The old problem of poor snedding quality especially at upper end for BCD still existed. The possibility of placing older tractor drivers on to processor type operations should be considered.

As this was Mr Dinning's last meeting prior to his promotion, Mr Simpson thanked him for his participation in the Board meetings since their inception in September 1984.

10. Date of next meeting

Wednesday 7 May 1986 - 9.30am at Santon Downham.

Ref: U11/5/1

Thetford Forest District
Santon Downham

13 May 1986

BRANDON CENTRAL DEPOT - BOARD OF MANAGEMENT

Minutes of a meeting held at Forest District Office, Santon Downham on Wednesday 7 May 1986 at 9.30 am.

Present: Mr L M Simpson (Chairman)
Mr N Dannatt (Operations Manager E(E))
Mr B Griggs (DF BCD)
Mr J Ogilvie (Asst FDM Thetford)
Mr R Varney (Secretary)

Please return

	ACTION	INFO.	INIT.
OF		/	BJ
FOR.		/	RAH
FMAN		/	
RT		/	
RR		/	

1. Minutes of previous meeting held on 5 February 1986

Agreed as a true record.

2. Matters arising out of the minutes

None

3. Management Accounts:30.3.86

The control documents for the above period were examined and discussed. Mr Griggs queried the need for the quarterly narrative for Conservator and Mr Dannatt agreed to investigate this.

Mr Ogilvie commented that the 84/85 Trading Accounts were a long time being vetted and approved by Conservancy Office and he hoped there would not be a similar delay for the 85/86 accounts.

4. H&M Audit Report: March 1986

Mr Simpson said that the report asked local management to continue to look carefully at the operations and steer towards better productivity.

5. Input from Forest

Mr Griggs reported that input was 27% down overall after the first 5 weeks of the new FY. Lack of Cambio poles in particular was causing concern but it was appreciated that the March windblow had adversely affected the situation. Mr Ogilvie thought that cambio supply could be increased with the hopeful introduction of the new processor. Mr Griggs said the selection of cambio (in the forest) out of potential long butts may help. Change Cambio spec. and trial loads to include smallest long butts.

6. Haulage of Round Mining Timber

Mr Dannatt had written on 29 April to the NCB to seek their views on the trial of the ten loads of timber using lorry mounted cranes. No response had been received but Mr Dannatt said that for the future Peckham must be asked to justify the extra £40 per load charge which the FC were currently splitting 50/50 with the NCB for the purpose of the trial. Only 1st 2 loads & maybe 2nd 5. # by Tr Dannatt. Disputed where do we go from here.

Mr Dannatt said that consideration should be given to splitting future haulage contracts into thirds (similar to HQ practice for fertiliser contracts) but Mr Griggs thought this would be very difficult in view of the lack of suitable contractors. But were impartially the complications resulting from allocation of specific loads & delivery locations between 2 or 3 contractors. Reduced administration to do so.

7. Peeler Performance

8. Methods of Payment

It was agreed that both of Mr Grigg's papers on these two matters should be the subject of special discussion at an extra-ordinary meeting of the Board at 9.30am on 2 June 1986.

9. Additional Equipment - Sorting Bins

Mr Griggs had forwarded a paper to CME who had put the case to HQ for additional capital expenditure. Mr Lofthouse had replied that he considered there was no justification for spending £10,000 in view of no likely increase in NCB volumes. Mr Dannatt said that we must convince HQ of our case and asked Mr Griggs to spell this out based on the premise that the design of mill for a certain product mix had now changed. This now meant diverting material (splits to rounds) which gave lower income. Thus at a given date it could be estbalished by how many cubic metres we were in arrears with splits orders. Therefore with more bins so many additional loads worth £Xk could be delivered. Mr Griggs undertook to forward draft to Mr Dannatt.

10. Computerisation

Mr Griggs said he had attended a meeting at Conservancy Office including Messrs Quigley and Atkins from HQ. The latter were considering a leased line instead of a dedicated line.

Mr Dannatt had recently attended a HQ H&M meeting where he learnt that staff there were embarrassed by the amount of work put in by local management with such obvious lack of development. The CISP package for BCD would go ahead but the stock control project was uncertain and may require a further case to ADP division.

11. Work Study Input - Material

Mr Griggs said that because of problems following the redevelopment of the depot, Work Study had been unable to carry out their planned project. Mr Dannatt asked Mr Simpson to check that a project had definitely been planned and ascertain the present position.

12. Power Factor Correction Equipment

Mr Griggs reported that the capacitors have been installed resulting in a factor of .95 which was about the ideal situation. He was to meet the Electricity Board to discuss further savings due to lower power requirements. The present equipment could cope with loads upto 450k Va whereas the highest requirment had only been 204k Va.

13. Weighbridge

Mr Griggs said the weighbridge had been struck by lightning 3 weeks ago resulting in damage to the printer. This meant the purchase of a new printer which was supposed to be less susceptible to storm damage. However, following a further storm over the Bank Holiday weekend the new printer was found to be inoperative. CME will write to the firm stating dissatisfaction with the situation.

14. Staffing

Mr Griggs said there continued to be pressures on clerical staff in the office and problems with sickness and other absences on the industrial side. He hoped the much awaited Staff Inspection report would soon be forthcoming.

15. Office Extension

Mr Griggs said that lack of space in the office was a problem caused by the computer equipment and the recently acquired photocopier. Mr Dannatt said he had been advised that an additional VDU was likely to be required to cope with future computer workload which would place more strains on office space. He stressed the need for Mr Griggs to indent for more space rather than less when submitting details to the Estates section. It was felt that Mr Griggs should have a room large enough to hold meetings. It was understood that the extension was in next year's budget although planning was to proceed as soon as possible and CLA should be asked to state present state of play.

16. Any other business

(a) Mr Varney related the problems with the installation of the computer telephone lines linking BCD and this office via the Workshops. There had been six separate visits by BT engineers over the last month with very little progress. CLO and ADP Division HQ had been advised of the situation and developments were awaited.

(b) Mr Ogilvie enquired about the need for an extra cam on the peeler deck for Lokomo material and Mr Griggs said this had been discussed and borne in mind.

(c) As this was Mr Ogilvie's last meeting before his departure to Lesotho in June, Mr Simpson thanked him for his involvement with the Board over the last year.

17. Date of next meeting

Tuesday 23 September at 9.30 am.

Ref: U11/5/1

CONFIDENTIAL.

	ACTION	INFO.	INIT.
C/F		✓	EJ
FOR.		✓	RAH
PMAN		✓	a/m

Please return.

Forest District Office
Santon Downham

6 October 1986

BRANDON CENTRAL DEPOT - BOARD OF MANAGEMENT

Minutes of a meeting held at Forest District Office, Santon Downham on Monday 29 September 1986 at 9.30am.

Present: Mr L M Simpson (Chairman)
Mr N Dannatt (Ops Manager E(E))
Mr B Griggs (DF BCD)
Mr J Charles (DO Work Study) - Item 3 only
Mr R Varney (Secretary)

1. Minutes of previous meeting held on 7 May 1986.

Agreed as a true record.

2. Matters arising out of the minutes

(5) Mr Griggs reported that the selection of cambio from long butts in the forest had helped the input situation.

(6) The £40 surcharge per load by Peckham had been discussed with HQ and Mr Dannatt said the matter was rather delicate and NCB were looking for a price reduction - not an increase.

(12) Mr Griggs said the new transformer with reduced capacity (250Kva) had been installed. - 1990.8

(15) The plans and design for the office extension had been approved

3. Future Work Study Involvement

Chairman welcomed Mr Charles to the meeting for this item.
Mr Dannatt said that the Treasury via National Audit were investigating major capital investments and felt that BCD would come under scrutiny. He felt it necessary for a ~~through~~ thorough in-house review into the running and organisation of the depot to be carried out as soon as possible with a view to checking the following:

a) Implications of strapping ~~loads to BSI standard~~ PITWOOD.

b) Down time on peelers and subsequent produce movement problems.

c) Are the mill and peelers working to capacity and is throughput maximised?

d) Consideration of feeding material butt first into peelers rather than tip first.

e) Recent Work Study tables were not being used and what new studies must be made to update or check the output guides?

f) Incentive payments for peeler not yet introduced.

g) Papers prepared by Depot Manager for Commissioners Ops. Tour to be made available.

Mr Dannatt asked Mr Charles to look into these matters with some degree of urgency and to go back to the original design of the new depot to see what was expected and check what can be achieved.
Mr Charles undertook to have first results of his investigations to be made available by the next Board meeting.

. Management Accounts - P/E 31.8.86

Mr Griggs took the meeting through returns which were examined and discussed. It was noted that spruce and other species were now coming in from alternative sources viz North Norfolk and ~~Sherwood.~~ Pitwood sales were down due to the 2 week closure of the Depot in the summer. and reduced demand both current and in prospect.

5. British Coal Contract

Mr Griggs reported that ~~orders were~~ dispatch was down 17% and there had been more cancellations than supplementaries. Closures and amalgamations of mines ~~were causing problems.~~ plus contracted stock control and reorder system now complete introduced Sept. has led to destocking exercise.

6. Staffing Levels

Reference was made to Mr Griggs' note of 12 September which set out the situation on Depot manning. Mr Griggs related the problems caused by an ageing workforce (45% over 50) and long term sick absences. Surplus tractor drivers continued to be absorbed from the forest if fit for the work. Mr Dannatt felt that there may be need for a radical change in policy and that ex forest staff should not as a right be allowed to spend their remaining service in the Depot. However before any decisions were made he thought that it would be necessary to compare the total needs of the Depot in relation to future British Coal orders against the Conservancy as a whole when the new Production Forecast was available. Should this clarify a need for recruitment then this must mean younger able bodied men who could be assured of a future in the Depot. In answer to Mr Simpson, Mr Dannatt felt that BCD could not be regarded as an entity on its own and therefore solve its own staffing problems without reference to Thetford Forest District because it had been ~~agreed~~ traditional ~~by~~ that ex forest staff could be transferred to the Depot in the event of inability to carry out forest work. In the meantime, an embargo on new recruitment would continue.
The case of Mr Cator's possible application for medical job release was discussed and it was felt that this should be considered as against the Forest District and not just the Depot.

7. BCD Trading Account 1985/86

Chairman confirmed the Trading Account had been issued but Mr Dannatt said that following investigations by CME there had been more adjustments to the figures. Sid Gudum's letter.

8. Any Other Business

a) Mr Griggs was concerned to know the total programme of GPO poles to come from other Forest Districts which were to be peeled ~~and stacked in the Depot.~~ The budget only allowed for Thetford input. Mr Simpson was also concerned about the stacking space that would be required to accommodate the additional input and suggested a site meeting with Mr Griggs and also Mr Marshall. Hostetal & Samways

b) Mr Griggs reported complaints from ~~Challis~~ Chase Fencing Supplies concerning quality of fencing materials. There had been no problems with other customers and there was a bouyant market.

c) Mr Dannatt hoped that CCISP would be available for the Depot by 1.4.87. Not now likely for another 6-9 months, according to Mr Quigley.

9. Date of next meeting

Thursday 4 December at 9.30am.

	ACTION	INFO.	INIT.
CTF		✓	
FOR.		✓	RAH
PMAN		✓	

CONFIDENTIAL.
BEARE REPORT.

Forest District Office
Santon Downham

12 December 1986

BRANDON CENTRAL DEPOT - BOARD OF MANAGEMENT

Minutes of a meeting held at Forest District Office, Santon Downham on Thursday 4 December 1986 at 9.30am.

Present:	Mr L M Simpson	(Chairman)
	Mr N Dannatt	(Ops Manager E(E))
	Mr B Griggs	(DF BCD)
	Mr J Oakley	(H&M Division, HQ)
	Mr R Varney	(Secretary)

Apologies for absence were received from Mr J Charles.

Chairman welcomed Mr Oakley from HQ to the meeting.

1. Minutes of previous meeting held on 29 September 1986

Agreed as a true record subject to the amendments which were noted on the main file copy.

2. Matters arising

(3) Future Work Study Involvement

Mr Griggs said he had supplied daily records and papers prepared for Commissioners visit (Mar 86) to Mr Charles who had presented the Board with an initial report of his findings. These indicated that the Output Guides remained an appropriate basis for the introduction of an incentive payment scheme. Mr Griggs said there was no point in introducing such a scheme unless adequate input and markets could be secured against the resulting production levels. He reported that the potential throughput based on improved production levels resulting from recently improved productivity aimed towards the stockpiling of pitwood might be 55k m^3/annum.
Mr Oakley then reported on a recent meeting with British Coal at Doncaster.
He said that due to the current competitive low price of oil, British Coal had up agreed a price reduction with its major customer, CEGB for the supply of coal to November 1987.
BC were mining by the retreat mining method which involved the use of less round pitwood, particularly splits. In addition as a result of the introduction of a centralised computerised stock control system BC found they had any excess stock of 29k m^3 of pitwood, and in any case now required 6k m^3 less than originally estimated. This served to reduce the current year's requirement ~~for~~ from 100k m^3 to 65k m^3 of which FC ~~national share would be 30% ie.~~ contract 40k m^3 including unpeeled, ~~reduced to approx 20k m^3. It had been put to BC that the contract for 86/87 was 40k m^3 and the proposed reduction implied serious cash flow problems for FC.~~ ~~Further~~ Discussion had resulted in ~~the proposition~~ agreement that FC should prepare pitwood to place in stock in excess of that volume covered by orders and that BC would pay for this stock before delivery. The volume to be agreed later. B.C. also agreed to renew the contract and buy 38 thous. m^3 in 1986/87.
Further information given regarding BC's projections for future round pitwood requirements confirmed a continuing reduction of considerable proportions.

as Brandon's share

A proposal to put 3k m^3 into stock was agreed in principle but Mr Griggs expressed the hope that the basis for monitoring progress towards this objective should be gross volume rather than individual sizes. This proposal implied the following production in current year, say 21k m^3 supplied

plus 3k m^3 into stock

total 24k

As normal stocks amounted to 1k m^3, the stock level would be 4 times the norm and the ability to meet this requirement very much depended on adequate input, staffing, boxes and space.

During the discussions at the meeting Mr Oakley reported a 3% price increase from 1.9.86. He also added that BC had given notice of termination of the current, 3 year rolling contract as at 28.2.89. In these circumstances FC had to maximise sales to the limit in the remaining period. There would be opportunities to tender for volumes in excess of the 30% (negotiated) and it was agreed that reduced unit costs at BCD were essential if we were to compete successfully for this volume with our competitors as their current prices were currently lower than ours.

Further general discussion covered BC's declared requirement for strapped bundles which although considered inevitable could not be undertaken without a price increase to cover the additional costs involved. This must be borne in mind in future negotiations with BC.

The meeting agreed that Depot should not be dependent on BC orders and that every effort should be made to examine alternative markets.

Concerning the staffing implications at the Depot, Mr Griggs referred to the case of one man who had applied for medical job release. On his return to work from his current sick leave Mr Griggs would be unable to employ him on his former duties due to the lapse of the man's HGV licence brought about by his state of health. The problem was recognised by the Chairman who in the light of staffing developments at the Depot and matters relating to future production levels decided not to allow medical job release for the worker concerned.

(8a) Any other business - GPO poles

Mr Griggs said that putting concentrated volumes of telegraph poles through the peelers had resulted in a lot of damage to the singlers and bins. There had been many breakdowns with subsequent downtime on the peelers. Relatively large pole programmes wearing plant working near to optimum weight (8c) - CCISP and prolonged periods and staff from Auto File

Mr Griggs said that Mr Atkins from HQ would be visiting the Depot the following week.

3. Input of pole material/BC contract

Discussed under matters arising.

4. Local Management Accounts P/E 2.11.86

Mr Griggs explained the accounts which related to the narrative (summary sheet 6 October. 1.6.86 to 2.11.86). Purchases indicated less than 50% target volume input with only one day's peeling of Cambio poles available. Wood wool stocks were the lowest ever. The summary showed the profit was as much a product of movement in WIP and stock as had been sold. 10 date 70%

Chairman said that Mr Griggs spent a lot of time and effort producing the management accounts and after preparing them for 2 years asked if the Depot Manager found them of value. Mr Griggs felt there was a benefit from producing them as they had altered management's approach to the running of the Depot.

5. Woodwool Production

Mr Dannatt reported on discussions with Torvale who had been informed that unless a price of £50 per m^3 was forthcoming, FC would not be prepared to do business.

6. Stake Production

Mr Griggs said that with the increasing small diameter material, it had been agreed to accept species other than pine. This meant that some customers were having stakes of mixed conifer content which had caused complaint from Calders and Grandidge. Mr Dannatt said it was essential that this customer must be informed in writing what the load(s) consisted of ie. mixed conifer species.

7. Any other business

(a) The insistence by BC that all supplies of pitwood must conform to a British Standard had caused problems. HQ had taken up the matter with BSI who had queried the use of Stanley rules for the measurement of timber.

(b) Mr Griggs referred to the matters of road surfacing, drains and maintenance. He had recently spent £1k for cleaning drains and the CCE had complained that the expense had been charged to the incorrect accounts. The CCE recognised the work was essential and it was agreed that for any future similar work the area engineer would be given a plan of the Depot indicating drain layout.

(c) Mr Griggs referred to the recently received Staff Inspection Report on Thetford Forest District including BCD. He was pleased to note that it had vindicated his thoughts on office staffing.

8. Date of next meeting

Provisionally Thursday 19 (or 26) February 1987 at 9.30am.

Forestry Commission
231 Corstorphine Road
EDINBURGH
EH12 7AT

Mr N Dannatt
E(E)

Our Ref: U6/6/6

BRANDON DEPOT - BOARD OF MANAGEMENT MEETING - 4 DECEMBER 1986

Thank you for sending a copy of the draft minutes of the meeting which reflect considerable credit on Mr Verney in the way he handled a mass of data concerning British Coal's requirements and the FC's allocation. I have made one or two suggestions by way of clarification which I hope you will agree to include.

We had quite a discussion on British Coal's RMT requirements over the next 4 years and I feel that it might be useful for future reference if the figures were included in full in the minutes. May I suggest that the last sentence of the second paragraph of item 3 be replaced by a new paragraph as follows:-

"British Coal have indicated that their requirement for RMT for the period 1987-1990 is expected to continue to fall. FC's negotiated share is 30% of the total but this also includes unpeeled pitwood. Details are:-

	1987	1988	1989	1990	
England	66	64	62	60	
Scotland	1	1	1	1	
Wales	13	10	9	8	(unpeeled)
GB	80	75	72	69	
FC 30%	24	22.5	21.6	20.7	
Peeled	20	19.5	18.9	18.3	
Unpeeled	4	3	2.7	2.4	

(It is likely that British Coal will accept the total FC supply as peeled RMT with no unpeeled RMT being supplied)".

I will leave it to you to decide if you would like to draw any implications for the depot which these figures suggest.

J S Oakley
Harvesting and Marketing Division
22 December 1986

	ACTION	INFO.	INIT.
C/F			
FOR.		/	
PMAN		/	

Please return.

Forest District Office
Santon Downham

18 February 1987

BRANDON CENTRAL DEPOT - BOARD OF MANAGEMENT

Minutes of a meeting held at Forest District Office, Santon Downham on Thursday 12 February 1987 at 9.30am.

Present -	Mr L M Simpson	-	Chairman
	Mr N Dannatt	-	Ops Manager
	Mr B Griggs	-	D.F. BCD
	Mr R Varney	-	Secretary

1. Minutes of previous meeting held on 4 December 1986

Agreed as a true record subject to the amendments noted on the main file copy.

2. Matters arising

(3) British Coal Contract.

In relation to British Coal orders from 1 March 1987, Mr Dannatt reported that BCD had been allocated 18km^3 based on the same proportions as allocated in the current year. This represented 15km^3 plus 3km^3 carry over from last year. Mr Griggs said that supplementary orders already received from BC would jeopardise our ability to stockpile the agreed 3km^3 referred to at the last meeting.

HQ had been informed that the minimum BC order was 22km^3 and that any doubts about future orders nationally should be to the benefit of BCD.? The Wentwood depot was on notice that their allocation would be zero the year after next.

It was agreed that for the purposes of future planning and working the current budget programme of 46km^3 input from the forest should apply - this should give 25k peeled pitwood.

3. Progress of stock reserve of pitwood

7km^3 of pitwood poles including small roundwood had been input from the forest during the period mid December 1986 to 6 February 1987 at an average of 894m^3 per week. To meet targets an average of 1km^3 was required. Not true.
The December 1986 stock value had risen to £56.7k.

Wk 37. 22804m^3 to complete Sales Plan
= 1520 m^3/wk. 15 wks.

4. Strapping of B.C. despatches

Mr Griggs' report of 24.1.87 had been approved in principle and authorisation to recruit two extra men had been received. In turn this meant medical Job Release for the existing worker could now be allowed and proceed, to be offset against one of the new recruits.
DF BCD had been in contact with CME over new loader and trailer requirements.

1-12-86. to 7-2-87. = 10 wks.
7905 m^3 = 794 per week.

5. Local Management A/cs (p/e 28.12.86)

These were presented by DF with his report of 30.1.87. There had been an improvement of 5% in input since October.

There had been a problem during the cold wet weather of waste wood slipping on the conveyor belts and alternative means of overcoming the situation had been discussed with M Edwards. T C. M. E.

6. Woodwool Production

FDM was concerned over advance supply on the new contracts had reduced stocks below what was required to be collected by customers before end of March.

DF reported problems with Torvale who were finding it impossible to collect contracted loads leading to an imbalance between them and other contractors.

Mr Dannatt had repeated his figure of £50/m^3 to Torvale and had informed them that we had other customers for the material which was initially earmarked for woodwool. It was not proposed to cut specially for Torvale direct from the forest. (Mr Dannatt suggested that due to reduced pitwood production 5.5km^3 be offered for tender for which Torvale could bid with other contractors.) ?

The problems caused by customers either not taking up regularly or, in one case, anticipating future orders with resulting stock holding difficulties were discussed.
It was felt necessary to have formal control over future contracts concerning more even take up of material. It was agreed that Mr Marshall be asked to investigate on the CCISP user group the possibility of DF keeping control over credit limits and take up balances and see if problem of o/bark and u/bark units used on present control printouts could be rectified.

7. Any other business

a) CCISP - the team had visited Wentwood.

b) FC34 (Jan 87) - Slightly underspent on wages and cash, slightly overspent on VME due to ~~recalculation from new PDC rates.~~ lyl balance between sums allowed and that which results from normal trans x P.D.C rates for year

c) BCD Working Party - the recent meeting had gone through the previous year's trading accounts. It was decided that instructions be devised on future construction of accounts on a simpler basis with the recasting of last year's version. It was suggested that Cat I logs should not be delivered to BCD and the current percentage now going into the Depot be compared with that quoted in Mr Ogilvie's report in relation to revising price analogues. The Board to discuss this point at their next meeting.

d) Auction February 1987 - the increases in Russian prices and those of other countries suggested reasonable prospects from the auction. Should reserves be met bids could exceed £1 million.

e) Staffing - 3 workers were due to retire before July and it was decided to take no action regarding replacement until the situation on future BC orders had crystallised.

7. Any other business

f) Office Extension - the siting of the existing septic tank ~~would mean a shorter extension than originally planned although~~ extra space would be required for paper storage due to forthcoming computerised procedures.

g) Charcoal burner - DF was considering revised charges for supplies to the charcoal burner in line with the prices likely to be charged to other customers. Mr Dannatt authorised Mr Griggs to negotiate a price in the region of £16 per ton.

8. Date of next meeting

Thursday 14 May 1987 at 9.30am.

	ACTION	INFO.	INIT.
C/F		✓	
FOR		✓	EMH
F'MAN		✓	

: U11/5/1

Forest District Office
Santon Downham

4 June 1987

BRANDON CENTRAL DEPOT - BOARD OF MANAGEMENT

Minutes of a meeting held at Forest District Office, Santon Downham on Thursday 14 May 1987 at 9.30am.

Present	Mr L M Simpson	- Chairman
	Mr N Dannatt	- Ops Manager
	Mr B Griggs	- DF BCD
	Mr R Varney	- Secretary

1. Minutes of previous meeting held on 12 February 1987

Agreed as a true record subject to the amendments noted on the main file copy.

2. Matters Arising

(5) - Chevron belts had been fixed to the conveyors and had overcome the problem of slipping.
J.R. DANNATT

(6) - Torvale had confirmed their interest in the supply of 10km³ peeled material. ~~HQ~~ had insisted on a price of £50/m³ but Torvale had withdrawn. Mr Dannatt said that a lower price could be accepted if we used pitwood waste, otherwise special cutting demanded top price. It was proposed to write to 3 woodwool contractors whose normal supplies were being called forward and contracts would likely run out. We would be prepared to help by cutting specially which would cost FC £10m³ more FOL. Mr Griggs to supply average take up figures for Mr Dannatt who would write to customers. ✓

(7)(g) Mr Griggs reported that a price of £14.50/ton had been negotiated with the charcoal burner.

(7)(c) BCD Working Party - there had been 3 meetings to date and the next one, possibly the last, was due on 3.6.87. A flaw had been discovered in the original 1979 economic ~~validation of capital investment~~ appraisal. The P & E calculation of rates of return were based on costs of felling and extraction to give roadside value instead of commercial roadside value. (Phase IIa of the report). For raw material input.
The current trading position was worse because there had been a greater increase in the price of raw material than the product.

3. Local Management A/cs P/E 29.3.87

Discussion centered around the comments made by Mr Griggs in his narrative report dated 11 May 1987. He emphasised the difficulty in preparing the tables because of the non availability of reports from the FAMIS system introduced wef 1.4.87. Generally the new computerised systems were causing many problems for staff trying to use them.

4. Bundling - BCD Despatches

Mr Griggs reported that as at end of April 1541 bundles had been despatched since March. During April 41% of total was bundled. The new loader should be available soon and the trailer was being altered. Mr Dannatt would pursue this with CME.

Two butt plates were required on the trailer and CME was investigating with M Edwards. Careful design of the formers and plates was required. There was a problem with the volume due to be despatched by the end of May - out of 29 loads, 22 were to be bundled, this being the end of a quarter

5. Staffing

Mr Griggs reported continuing problems with carrying out work. At present two men were sick and there was little or no cover for other absences. In order to meet commitments it would be necessary to increase overtime working or use staff from the forest. As the latter was highly unlikely Mr Dannatt ~~suggested~~ agreed that men be taken out of the sawmill line and placed in other areas. Whilst recruitment was banned it was felt that an increase in overtime working was the only option. on a short period basis.

6. BC - British Standard

A provisional certificate of registration had been issued and HQ had paid the fee. The provisional certificate was necessary because of problem of accurately measuring top diameter. The marking of bundles using black ~~tape~~ dye was being investigated by Work Study.

Mr Dannatt distributed copies of Mr Oakley's memo of 11.5.87 which was discussed. BC were not going to give the tolerances we would like and have used. BSI appreciated our problems over top diameter measurements. Mr Dannatt asked if it were possible to improve the situation at no extra cost. If 60% of the loads were acceptable, could 80% be achieved and maintained? Mr Griggs demonstrated the difficulty of the problem using discs of varying sizes which were millimetres apart in diameter. It was appreciated that the sawmill operators would have great difficulty in visually assessing t.d.'s of logs passing though the mill. Mr Dannatt said there were two ways forward viz: firstly our concern must be demonstrated by making and checking periodic samples of t.d. measurement which should become a regular ongoing exercise. Secondly the issue must be raised with BC through HQ (Oakley) and the practicalities of the present system explained and the fact that the rejection rate was minimal. BC must come down soon and ascertain for themselves the difficulties we faced. We should state the number of loads delivered over the last five years and quote the number of rejections which would represent a certain percentage over the period covering the whole range of sizes and t.d's. (Mr Griggs to prepare figures). Mr Simpson to organise independant sampling. An investigation into alternative methods of measurement eg electronic may be warranted.

7. Autofile Report

Mr Griggs had drafted his comments on the report and would be submitting these shortly.

8. Reject Material

It was agreed that the principle must be established that if the proportion of rejects was more than reasonable then there should be no loss to the Depot accounts.

9. Service to Forest and Customers

The weighbridge service at the Depot was provided free to the forest and this fact should be recognised. It was agreed that the costs of providing this service must be investigated including the weighbridge and administrative costs and costs of adjusting customers' loads. It was then suggested that customers be informed that we would be prepared to weigh their loads but a fee would be charged.

10. Any Other Business

A report by Mr Griggs of volumes supplied to BC during the year March 1986 to February 1987 ~~was trying to show that this produce formed the biggest share of the least profitable items by top diameter sizes~~. *
Reference again was made about the poor working of the new computer systems and all their inherent problems. It was felt necessary to record all shortcomings as they happened and present as evidence to back up complaints.

11. Date of next meeting

Friday 17 July 1987 at 9.30am.

* Compared with the first few weeks in 87/88 indicated increasing proportion of ≤ 120 mm and ≥ 180 mm these being either more costly to produce or more profitable alter markets

Proportion by vol. a) ≤ 120 mm } appeared to be increasing, these being
b) ≥ 180 mm } in the case of a) approx. 3 times more costly to process and in the case of b) it is considerably more profitable to sell material in these diameters as sawlogs at sideside.
It would be of considerable interest to know whether BCD supplies significantly more than 30% of the total B.C requirement in these ranges. (F.C. share of B.C material requirement = 30%)

Please return.

	ACTION	INFO.	INIT.
CIF		/	BL
FOR.		/	FAH
PMAN		/	✓

Ref: U11/5/1

BRANDON CENTRAL DEPOT - BOARD OF MANAGEMENT

Minutes of a meeting held at Thetford Forest District Office, Santon Downham on Thursday 17 September 1987.

Present : Mr L M Simpson - Chairman
Mr N Dannatt - Cons. Ops. Manager
Mr B Griggs - Depot Manager

1. Apologies

Received from Mr R Varney

2. Minutes of Previous Meeting held on 13 July 1987

Item 7. Mr Griggs confirmed that the brass standard rule had in fact been obtained prior to the meeting.
Agreed as a true record subject to the addition of explanatory notes recorded on the main file copy.

3. Matters Arising

To be dealt with under A.O.B.

4. Depot Input/BC and Other Contracts

Levels of peeled and unpeeled poles are satisfactory in relation to drying outand forecast product demands although input from Forest is running 26% below programme, ~~all~~ long butt material, while smallwood supply has almost doubled. There is no difficulty seen in maintaining current levels of input. Cambrian as Programme

Uptake by British Coal has not improved and the order level for the quarter beginning 1/9/87 presents a sad picture at only two loads per day. The current trend would indicate an annual figure as low as ~~15,000 m³~~ 16 200 m³.

Torvale requires to collect 3 loads/week to catch up on their contract.
Mr Griggs to contact them in the near future to establish likely uptake ~~on their new contract~~ against their total balances.

Mr Simpson explained the reason for cancelling the supply of pole length material from ~~binneage~~ binnage wood.

Mr Griggs reviewed his visit to the Institute of Groundsmen Exhibition with particular regard to use and marketing of similar minor products produced at BCD and the large scope for rounded material.

5. Local Management Accounts P/E 30/8/87

Mr Griggs talked through the salient points. Although there has been a marked drop in the levels of pitwood finished stock the period sales are well down (44%) on budget, colliery holidays contributing, and reflected in the dismal Profit/Loss figure* Mr Griggs explained his recent strategy to reduce the ~~large~~ stock of smallwood material and convert into BSR.* There was no profit/loss figure due to absence of F.C. 32 print pas last period H.D.

356m³

6. Bundling and Equipment

Mr Griggs reported that the trailer unit was now complete and working satisfactorily. A recent change in BC specification* requires a review of the grapple profile, possibly incurring further expenditure, and Mr Griggs is still studying the complete system.
BC currently pays £1 per bundle (£1.76/m³ based on average load size) but Mr Griggs considered the cost to be at least £1.50 (£3.00/m³). It is rumoured

Grossactional area

* March 1987 B.C. wrote) All Round - Split material timbers to be bundled previously only 1200mm and above.
2) Props per bundle 190 mm+ reduced by 40% to 6 to 12.

5. (Cont)

that BC may expect complete bundling by November although this service is not included in the current terms of contract. There is certainly no wish to invest in further resources for bundling at this stage.*

7. HQ Working Party Review

A decision on the future of the Depot is still anxiously awaited.

8. Haulage Contract

A meeting will be held with Mr Peckham on 22 September to discuss and agree price increases and tonnage for the second year of the contract to deliver pitwood and bungwood. It was felt that no more than 15,000 - 16,000 ~~tonnes~~ m^3 could be offered for delivery. 12,000 - 13,000 tonnes.

Mr Griggs presented his analysis of pitwood/bungwood haulage costs over the past twelve months and Mr Dannatt made comparisons with the Commercial Motor Operating Costs. It was considered that Mr Peckham could be looking for an increase in the region of ~~£6 - £10/tonne.~~ 6 to 10% H.D.

Mr Griggs confirmed the ~~main~~ local effort to reduce haulage costs, apart from sending as dry material as possible, ~~to avoid~~ by reducing consignments with double drops.
main aims:- Max. Vol. min. tonnage. Double drops very difficult to avoid but staff conscious of the extra cost involved

9. Stacking Heights

In view of the HSM/6 recommendation covering the limits for safe stacking heights Mr Griggs was concerned about its application to the Depot as the limits were often well exceeded in stacking both woodwool and poles. It was agreed that Mr Griggs should review his Part III Statement ~~and draft~~ and draft an appropriate clause to cover his methods of working.

10. A.O.B. (B.S.I) recorded

a) Mr Griggs confirmed that sample diameter checks are being carried out on a fortnightly basis and also that the boards mounted with disc diameter classes have been set up at ~~the~~ operators' stations. with more to follow It is felt that this objective guidance has already been of ~~help~~ to improve standards.

~~At the instigation of BC a~~ further visit from the BSI inspector is expected ~~shortly.~~ H.D.

b) Staff - Mr Griggs confirmed his labour strength at 34.5

11. Date of Next Meeting

Thursday, 19 November 1987, 9.30am at Santon Downham.

* I said in my report dated 24th Jan. 1987 that 2 teams would be required to bundle and load 20,000 m^3 and our experience confirms this. Given a requirement for all R.M.T. to be bundled an annual programme of 16,000 m^3 is likely to be beyond our present resources.

.ef: U11/5/1

Please return

	ACTION	INFO.	INIT.
CIF		/	
FOR.		/	RAH
F'MAN		/	

Santon Downham

BRANDON CENTRAL DEPOT - BOARD OF MANAGEMENT

Minutes of a meeting held at Thetford Forest District Office, on Thursday 19 November 1987.

Present: Mr L M Simpson - Chairman
: Mr N Dannatt - Conservancy Ops Manager
: Mr B Griggs - Depot Manager
: Mr R Varney - Secretary

1. Minutes of previous meeting held on 17 September 1987

Minor observations were overruled in the light of circumstances relating to the closure of the Depot.

2. Staff

Following the official announcement on 16.11.87 that the Depot was to be closed with effect from the end of February 1988 with the workforce being served redundancy terms, there now appeared to be some confusion as to what in fact was on offer to the staff.
The staff understood from the meeting on 16.11.87 that they were to receive redundancy notices dated 1.12.87 effective for 6 months with all staff leaving by 29.2.88. Should anyone be able to find alternative employment in the mean-time, this would be allowed within reasonable management needs, without affecting redundancy payments. However, A&FO has stated that before redundancy could be implemented attempts must be made to locate staff with other local Government Departments. If this proved possible then redundancy would be inappropriate.

The four regular Thetford lorry drivers had been seen by FDM and had been offered the choice of redundancy or redeployment on either H&M or FM work at Thetford. Two had been directed in the meantime to commence FM duties on 23.11.87, the other two would continue lorry driving for upto a maximum of three months. Chairman to send note of meeting to A&FO.

In principle, it was agreed that the objective throughout the rundown would be to leave a clear site.

3. Stock

The contents of Mr Quigley's note of his meeting with British Coal (BC) on 17.11.87 were discussed. The stock figures quoted (at 1.11.87) for round mining timber had been analysed by BC which showed that after taking into account definite and possible orders there remained a balance of approximately $117m^3$. BC's suggestion that this material might be converted to lengths which they would accept would only be followed as a last resort due to cost.

Concerning the $14Km^3$ of peeled pole stocks, Mr Griggs suggested that rather than sell this material as poles through BC it might be better to convert it against remaining pitwood orders and outstanding commitments to woodwool customers thus reducing the possibility of compensation claims.

woodwool commitments at that time amounted to 9.3Km^3 upto 31.3.90. It would be necessary to discuss with woodwool customers the extent to which they could take up the volume balances depending on space, haulage, finance and prices to be agreed for subsequent years.

Mr Dannatt telephoned Mr Quigley and obtained authority to utilise the peeled pole stocks in this manner of this decision.

Mr Quigley to inform BC ~~that there would be no stock after February 1988. Any remaining material could be offered to Walker.~~ Bungwood customers to be supplied with as much material as could be managed up to the due date with Mr Quigley's support for recommendation for extended credit.

Supplies to the charcoal burner were considered and it was agreed that no undertakings could be given but his requirements would be dealt with sympathetically and supportively as long as possible. Having decided to leave a clear Depot site the charcoal burner was considered to be the only means of disposal giving useful returns for box members and bearers.

The retail sales of bark had been stopped there being a 3.5Km^3 contract commitment with 0.8Km^3 stock. One of the customers may be interested in the pulveriser machinery.

The best use of remaining stocks of PSR would be made. If too big for rustic material, this to be cut into 2m Kronospan. Interest has already been shown in the swing line machinery.

4. Weighbridge

It was agreed this should be the last item to be disposed of as income should be maximised from public weighbridge use. NCB despatches etc would require weighing for haulage as would disposals to the charcoal burner.

A MacKenzie to operate should Mr Frost leave.

5. Date of next meeting

Thursday 17 December 1987 at 9.00am at Santon Downham.

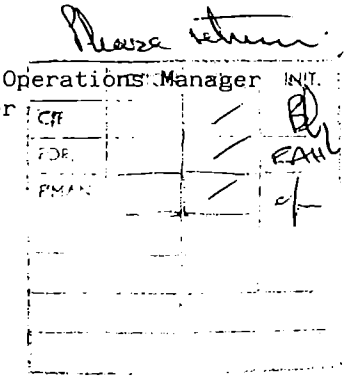
* any material remaining once Pitwood orders and Woodwool requirements have been met at no staff remain, could be offered to J. Walker & Sons.

copy: Mr L C Couch, CLA, Cambridge

F. U11/5/1

BRANDON CENTRAL DEPOT - BOARD OF MANAGEMENT

Minutes of a meeting held at Thetford Forest District Office, Santon Downham on Thursday 17 December 1987.



Present:	Mr L M Simpson	-	Chairman
	Mr N Dannatt	-	Conservancy Operations Manager
	Mr B Griggs	-	Depot Manager
	Mr R Varney	-	Secretary

1. Minutes of previous meeting held on 19 November 1987

Agreed as a true record.

2. Matters arising

(2) Staff

Mr Griggs reported much confusion over the calculation of compensation awards which were being rechecked by HQ. Some original calculations were incorrect. It was agreed that the whole area of redundancy, awards and pensions was far too complex for most staff to understand and the system needed simplifying. Mr Simpson reported that redundancy notices had not yet been issued to the four lorry drivers, the possible storage of sawlogs from the recent windblow would dictate this but one lorry had already been earmarked for transfer by CME.

(3) Stock

PSR - The conversion and sale of potential stock was progressing to plan.

3. Utilisation of peeled stock

There was 1800m^3 of pitwood orders to supply which would be completed by mid February 1988. With approximately 1200m^3 in stock there remained 600m^3 to cut. No more supplementary pitwood orders would be entertained after 23 December 1987, in view of staffing situation. More woodwool was being cut as pitwood declined and stocks were increasing.

Mr Dannatt had spoken to Torvale who were interested in taking 4.5Km^3 (contracted to March 1990) at the rate of 1Km^3 per month to complete by mid May 1988 as long as prices did not rise and credit limits could be organised. Mr Dannatt had contacted HQ who required the file to be submitted to check out on credit control but in principle Mr Quigley had thought that Torvale's request was not an unreasonable one and could be accepted as an extended credit risk.
Other woodwool customers were keen to obtain supplies and Mr Dannatt said that 7.5Km^3 of the peeled pole stock (14.0K) could be committed to woodwool.
Mr Griggs to send note to Mr Dannatt. He was not in a position to state amount available in pole lengths until January 1988.

The uptake of remaining stocks of bark continued and predicted total of available stock would be met.

4. Release of Staff

The present situation was as follows:-

2 Staff already released
4 " to be released by end of year.
1 " " " " " " " January 1988.
1 " " " " " " " February 1988.
1 " transferring to Research on 4 January 1988.
9

The weighbridge operator was due to go by the end of the year and it was agreed that Mr Mackenzie took over the job until the Depot was finally disposed of. Attempts should be made to give Mr Mackenzie some Beat experience after February 88 in view of his possible appearance before a Forester Board in April/May. Mock boarding for him should also be considered. Ray Whitta to provide cover.

Mr Dannatt read out a letter he had received from Culford Sawmills offering employment to BCD workforce. It was agreed that the men should see a copy of the letter (on the notice board) and make their own decisions.

5. Customer liaison/requirements

Claim of breach of contract had been received from Peckham's solicitor. FC have taken steps to mitigate situation by putting him in contact with merchants who may be able to put business his way, viz Walker. Mr Griggs to advise Mr Dannatt of outcome of Peckham's discussions with Walker. Any steps we take to relieve Peckham's problems should be noted on file.

With between 170K and 200K stakes being withdrawn from the East Anglian market following closedown, attempts should be made to help with the smallwood situation. Mr Dannatt agreed to sale of 350 tonnes of ~~small poles,~~ mainly non pine, to David ~~Laughton,~~ Lawton Ollerton at £22.00/tonne. Unpeeled H/C and reject hoop butts.

6. Disposal of equipment

(a) Peeler Complex - to be advertised in TTJ inviting tenders during 3rd week of January 1988. February.
Prefer to sell as a whole lot, to be cleared away by end of ~~January~~ 1988, rather than by individual components. (Tender 8 days March)

(b) Sawmill - to be disposed of as one lot for tender.

(c) Ancilliary Equipment - to be sold as separate lots for tender.
Mr Dannatt to speak to CME to get details and clearance on release dates which were uncertain because of loading situation.

(d) Other buildings eg. messhut, office, weighbridge etc - disposal will depend on decision for the site as a whole. Board felt that CLA should be progressing thoughts on the manner of disposal of these items.

Mr Griggs said it was important to protect the roadside stand of trees. due to presence of crossbills & nightingales among many other points of interest.

7. Any other business

Mr Griggs said that referring back to item 4, he could not agree to release any more staff before the end of January 1988 because of the woodwool situation.

8. Date of next meeting

Thursday 4 February 1988 at 9.30am at Santon Downham.

: U11/5/1

BRANDON CENTRAL DEPOT - BOARD OF MANAGEMENT

Please return.

Minutes of a meeting held at Thetford Forest District Office, Santon Downham on Thursday 4 February 1988.

	ACTION	INFO.	INIT.
C/F		✓	
FOR.		✓	RAH
FMAN		✓	

Present: Mr L M Simpson - Chairman
Mr N Dannatt - Conservancy Ops Manager
Mr B Griggs - Depot Manager
Mr R Varney - Secretary

1. Minutes of previous meeting held on 17 December 1987
Agreed as a true record.

2. Matters arising

Item (4) Mr R Whitta is now operating the weighbridge.
Item (5) Mr Lawton collected unpeeled mixed conifers and rejected long butts.
Item (6)a Peeler units to be removed by end of March.

3. Report on progress towards closure of BCD

Chairman invited Mr Griggs to run through and update his report dated 24 January 1988 which had been addressed to all parties. A copy of the report is at Appendix 1.

(a) Staff - 17 more staff were now due to leave on 26 February, with one to go on 25 March. Mr Griggs suggested that the Front End Loader driver and cleaner be retained until the end of May and the messroom closed by mid March. This leaves two staff still in post - one who was ~~sick and~~ 60+ and the weighbridge operator who should be retained as long as possible.

The situation at 1 April 1988 was envisaged as follows:

1 Chief Forester
1 Forester
1 Foreman ✗
1 Casual AA
1 F.E.L. operator (retain machine until end of May) ✗
1 Weighbridge operator ✗
1 Office cleaner
1 District Staff (ex lorry driver) as back-up

One AO was now in the Workshop and the remaining AO to be transferred there by the end of March.

(b) Machinery

Everything had been sold with the exception of the switch gear building. The sawmill could be dismantled once our work was completed. All the ancillary equipment sold except the bundling trailer, one swing saw and ~~high~~ stako pointer - the latter to be transferred to W(E).
The wheeled plant to be entered in the next auction (May 88). Our interest in the weighbridge and office will expire end of September 1988 and problems could be forseen in manning from May 1988. It was agreed that this should await a decision, pending sale of site negotiations and other factors.

(c) Contracts

Pitwood - on course to be completed by 19.2.88 - no cancellations would be accepted.

Woodwool - pressure to be applied, through reminders by Mr Griggs, to firms to collect material as soon as possible.

Bungwood - 3 loads per week upto the end of March.

Waitewood - Charcoal burner to take bearers at £8/ton. M Edwards to chip remainder. once firewood sales fail off in the Spring.

Haulage - No pitwood after 19.2.88, bungwood up to the end of March.

4. Any Other Business

Budget 88/89 - Mr Griggs had prepared, following discussion with Mr Scotney, a manual outlay. This included loading woodwool to September 1988, and retaining the casual AA until end of May 1988.

Office equipment - Mr Griggs to prepare list of all items becoming available eg telephone system, computers, etc.

Long Service Certificates - some of the staff leaving on 26 February would be entitled to receive a Long Service Certificate - it was hoped these will be available for presentation to staff by that date.

5. Date of next meeting

Tuesday 22 March 1988 at 9.00 am.

.ef: U11/5/1

Forest District Office
Santon Downham

B.C.D. BOARD OF MANAGEMENT MEETING

Minutes of a meeting held at Thetford Forest District Office, Santon Downham on Tuesday 22 March 1988.

	ACTION	INFO.	INIT.
C/F		✓	BL
FOR.		✓	RAH
FMAN			

Present: Mr L M Simpson - Chairman
Mr N Dannatt - Cons. Ops Manager
Mr B Griggs - Depot Manager
Mr R Varney - Secretary

1. Minutes of previous meeting held on 4 February 1988

Agreed subject to minor amendments recorded on file.

2. Matters arising

None.

It was agreed at this point that items 3 to 6 on the Agenda be discussed as an update of Mr Griggs' report attached as Appendix 1 to the minutes of the last meeting.

(a) Staff

Two staff were due to leave on 25.3.88 and one more on 31.3.88. Staff remaining would be as follows:-

Mr Griggs - C/F i/c Depot
Mr Hoblyn - FOIV - 2 days on Plant Health, 3 days at Depot
Mrs Hubbard - Casual AA - 30 hours/week up to end of May
Mr A Mackenzie - Foreman - to be employed more on forest as part of induction training before appearing at Forester Selection Board at end of May 1988.
Mr R Edmunds - Industrial - on loan from Forest for as long as possible

Expenditure for retention of these staff has been budgeted for by Mr Griggs.

(b) Machinery

Both peelers had been removed. Remaining were the peeler building, bark mulcher, bark conveyor, and bays, one infeed deck and singler and one outfeed bin. The sawmill building should be completely dismantled by 25.3.88. Most of the machinery had been transported to Scotland and should be cleared by Easter. Other fixed plant was being uplifted by purchasers.

(c) Weighbridge

There remained a continuing use of the weighbridge as a public facility and our ability to run the service after March was discussed. There was an FC need for the facility up to end of September to cater for woodwool despatches.

The possibility of granting a licence on a month to month basis to one of the main outside users to run the weighbridge on our behalf was considered.
The weighbridge would as far as FC was concerned, remain open until 31.5.88 and Chairman thought a definite closure date ought to be announced. In view of FC woodwool despatches for a further 4 months after this date it was felt that approaches should be made to outside users to see if they were interested in running the service.

The Area Land Agent, who was called in at this point, warned against granting a licence lasting more than 6 months as a business tenancy could be construed by the other party. He outlined developments over the sale of the site and thought that site surveys, planning applications and permissions etc should be completed by the end of September with a view to marketing the site in the Autumn. He recommended that any decision to contract out the weighbridge facility for the interim period should be referred to FC solicitor to avoid any possibility of a business tenancy being formulated. It was agreed that Mr Griggs would first establish if any of the local major users were interested in operating the service and refer to ALA as appropriate.

The possibility of inviting a shortly to retire member of the Forester staff to run the weighbridge was considered a good option to hold in reserve.

(d) Electricity Supply

In the interests of safety all supply to plant in the switch gear building had been disconnected.

(e) Contracts etc

Pitwood	-	$75m^3$ delivered to Walker sold and final clearance, 118 sizes & 4 sizes
Woodwool	-	RMC have cleared current contracts and requested further $2Km^3$ to be decided at latest by Sept 30th Torvale have taken $0.9Km^3$ since Feb 1st leaving balance $2100 m^3$
Bark	-	Still selling off the dump
PSR	-	Stocks virtually cleared
Cambio Poles	-	Cleared 400 tons
Long Butts	-	$3.5Km^3$ left - possibly put in July auction or tender
Wastewood	-	Charcoal burner's licence due for renewal at 1.4.88. Conditional clause to be inserted in any new licence to cover adjustment to site access which would be necessary once BCD site sold. Conservancy resumption of licence renewal to be checked.

(f) Timetable

All severance payments made out of this year's budget. Both AOs now working in the Workshop at Santon Downham - may be requirement for one to return to assist with end of year exercises. District Office to bear Mrs Hubbard in mind for future employment particularly in views of her flexibility and aptitude with computer systems. FARMS & PAYROLL

7. Dissolution of Board

Chairman to write to Conservator advising that purpose of Board was now completed and that a final meeting would be held probably end of September, once the future of the Depot site had been agreed. It was then hoped to have a Trading Account for 1987/88 available for submission together with a final balance sheet, assuming that Conservancy would provide much of this detail with information as necessary from Mr Griggs.

8. Any other business

HQ had written to Peckham's Solicitors inviting them to formulate claim against FC but nothing had been heard. We must continue to record every effort made to assist Peckham find alternative business. The parking of Peckham's lorries on site could cause problems but no action at present should be taken.

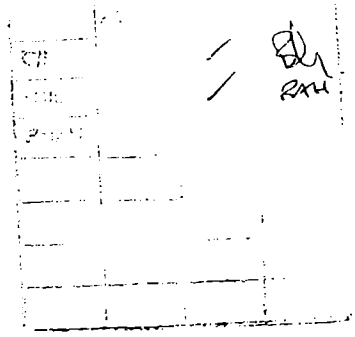
The local management accounts showed a loss of £160K up to 31.1.88 which was reflected by the diminishing pitwood sales. A final closure account should be prepared showing sale of site, severance pay etc to provide details for balance sheet referred to in para 7. Mr Griggs and Chairman to draw up terms of reference for a historical record of the Depot.

Mr Griggs to draw up inventory of office equipment and invite staff to advise him of requirements. When Mrs Hubbard left at end of May any remaining computer processes to be transferred to another location eg workshops.

9. Date of final meeting

Tuesday 27 September 1988 at 9.00 am.

Ref: U11/5/1



Forest District Office
Santon Downham

30 September 1988

BCD BOARD OF MANAGEMENT MEETING

Minutes of a meeting held at Brandon Central Depot
on Tuesday 27 September 1988

Present:	Mr L M Simpson	-	Chairman
	Mr N Dannatt	-	Conservancy Ops Manager
	Mr B Griggs	-	Depot Manager
	Mr R Varney	-	Secretary

1. Minutes of previous meeting held on 22 March 1988

Agreed as a true record.

2. Matters arising

(a) Staff

Mr Hoblyn commences 10.10.88 as Recreation Officer at Forest District Office.
Mr Mackenzie transfers 3.10.88 to H&M (North).
Mrs Hubbard's employment as casual AA terminates 7.10.88.

(b) Machinery

Four items remained belonging to Mackintosh which had not yet been removed or paid for. Mr Griggs to chase as necessary.

The future of the service bay with fuel installation and airline compressor had not yet been decided. It was felt that the items might prove useful for the redevelopment of the site and it was recommended that the matter be referred to the ALA for possible inclusion in the negotiations over the sale of the site, following consultation with CME.

The sum of £65 per month was still being paid for electricity supply to the main site with very little use. The ALA had considered that this supply would be an attractive proposition for a prospective purchaser and it was agreed to continue paying the bill.

(7) Dissolution of the Board

Conservator's agreement had been received subject to the review of the 87/88 Trading Account which was still not available. Final accounts would be complicated by the redundancies and closure situation and whilst this would be the last formal meeting of the Board, an informal meeting would be held to discuss the accounts.

(8) Inventory

Certain items of office equipment had gone eg. photocopier and chairs. Mr Griggs to draw up inventory of remaining office equipment and advise Mr Varney.

3. Closure Procedures

J Sell was to visit BCD on 28.9.88 to discuss and deal with procedures concerning the final weeks working, computer closedown and link with Workshops. It was agreed that District Office would provide computer input back up for payment of bills, cash account and time summaries. Mr Griggs to contact Mr Varney as necessary.

The existing office telephone system was possibly being transferred to a Scottish Forest District. In meantime Mr Griggs had asked BT to arrange for a cheaper installation based on a 3 phone system - one in the office, weighbridge and Mr Mackenzie's house. Incoming calls would ring all 3 phones simultaneously and Mr Dannatt expressed concern about Mrs Mackenzie being involved in answering official calls.
It was agreed that although a more sophisticated system would be more expensive and have to be leased for a minimum of one year, Mr Griggs would investigate the alternatives.

4. Weighbridge Arrangements

The weighbridge was to remain open to deal with public income and log store control until 31.3.89. Various options over manning were discussed and it was agreed that a case be prepared for the employment of an operator on a contract basis. Hours of work to be around 7 am to 4 pm with possible 5 pm finish as necessary. Mr Simpson to prepare as a matter of urgency.

5. Produce Despatches

Conversion complete by 30-9-88. 400 tonnes to collect approx. 250 tonnes shortfall.

Woodwool - RMC now completed contract - Mr Griggs to confirm.

Pitwood - Walker - ~~1200/1300~~ tons outstanding which should be cleared in another 2 to 3 weeks. Mr Griggs to chase.

The problems with Rolph's accounts going back to 1987 were discussed. Mr Griggs has asked Conservancy to produce statement of invoices and receipts and he will check Depot records. Mr Dannatt gave background on latest developments on the Camland and Peckham situations.

6. Management Accounts

assumed stock values were not realised at time of sale and this

The latest figures were examined and it was noted that ~~the value of the reducing stock~~ was reflected in the final statement, especially peeled poles.
Sales were still strong and it was anticipated that budgetted targets would be met. Mr Griggs would maintain the management accounts until closure.

7. History of Depot

Mr Griggs hoped that three months would be sufficient time to complete the draft but he would have a better idea by the end of October after having done initial research and talked to various ex members of staff.

8. Any Other Business

There being no other business, the Chairman formally dissolved the Board and thanked the members for their participation and very valuable contributions over the last 4 years.

BRANDON CENTRAL DEPOT

WORKING PARTY REPORT

INDEX

APPENDICES

6.5 Trading Accounts based on Rationalisation of Sizes for 1987/88 to 1989/90 in £/m^3

6.6 Cost Statement based on Rationalisation of Sizes and Minimum Savings from Closure

7.1 Costs used in Cost Statement for Thetford FD

7.2 Cost Statement of Effects upon Thetford FD based on Minimum Savings from Closure

7.3 Combined Cost Statement for BCD and Thetford FD based on Minimum Savings from Closure

1. Introduction

Between 1976 and 1979, Work Study Teams carried out a study into the siting, communications, production and efficiency of Brandon Central Depot. Four Work Study reports and 2 appraisals by Planning and Survey (then Planning and Economics) were produced which resulted in the investment of about £750,000 to modernise the depot. A list of the relevant reports is at Appendix 1.

a. Recently, there have been years when the Depot has not made a profit on its activities and at no time have the financial expectations of the Work Study reports mentioned above been met.

b. The Commissioner Operations authorised the constitution of our Working Party in January 1987 with the following terms of reference;

i. to examine the Trading Accounts for Brandon Depot and the results which have been achieved compared with the expectations of the original project appraisal and investment decision;

ii. to consider the prospects for the future of the Depot in the light of past trading results and the decline in British Coal's requirement for round mining timber;

iii. to make proposals for the future based on their consideration with a full cost appraisal. Finance Division and Planning and Surveys Division should be consulted as appropriate. The minimum rate of return required to justify operation of the depot is 5%;

iv. to report to Director Harvesting and Marketing by 30 April 1987.

The date for submission of the report was deferred to 30 June 1987 with the agreement of the Director Harvesting and Marketing.

c. The membership of the Working Party was as follows:-

Mr N Dannatt	Assistant Conservator Operations, E(E) (Chairman)
Mr B Roebuck	Harvesting Officer, H&M Division
Mr B Griggs	Chief Forester, Brandon Central Depot
Mr R S Elliott	Operations Management Accountant (Secretary)

d. The group has met on 5 occasions since its inception. It has not been possible to meet at shorter intervals, due to the heavy work commitments of the group, but this has had the advantage that we have been able to consider the up-to-date information from recent production forecasts.

2. Past Results

a. Trading accounts for the period 1980/81 to 1985/86 were analysed taking the 1985/86 Trading Account as the starting point and it was discovered that a number of assumptions were made which could not be fully justified. Appendix 2.1 details the changes made; for example, 10 per cent had been added to both the opening and closing values of the work in progress and stocks from 1983/84 onwards, no good accounting reason for this could be found and so it has been omitted. Similarly 7.5% discount from the value of the raw material into the depot from 1982/83 onwards has been excluded. Appendix 2.2 gives the original 1985/86 Trading Account and Appendix 2.3 shows the recalculated 1985/86 Trading Account, incorporating the changes given in Appendix 2.1.

i. The accounts for 1980/81 to 1985/86 have all been drawn up using identical conventions, in particular opening and closing values of stock

and work in progress have been assessed on the same basis, previously they were based on values 12 months apart. Oncost, overheads etc for 1980/81 to 1984/85 have been left as originally compiled as it would not have been possible to recalculate all the prior year figures on the 1985/86 basis. The revised Trading Accounts are at Appendix 2.4 with costs per m^3 shown at Appendix 2.5.

b. The original appraisal was based on an annual purchase (input) volume of 50 000 cubic metres and a possible maximum of 70 000 cubic metres. The expected base figure of 50 000 cubic metres was achieved only once, in 1980/81 and the input for the financial year 1986/87 was just under 40 000 cubic metres.

i. The forecasts contained in the original Work Study Reports vary considerably from the present outturn and projections. On investigation, it was found that costings, based on the 1977/78 Trading Account, first appeared in the Phase IIa Report dated October 1978. Comparisons between the actual 1977/78 Trading Account and the forecasts used are shown on the attached Appendix 3.1. It can readily be seen that the main difference occurs in the valuation of timber purchased. Whereas the Trading Account was based on 53 030 m^3 at £15.84 per m^3 the forecasts used "cost of felling, extraction, etc at £4 per m^3", plus haulage in. This figure was also used in the P&E appraisal dated 19 January 1979, which mentioned IRRs of 17½% for single shift working and 21% for double shift. The assumption of this cost was a fundamental error, the input of raw material should have been valued at its FOL forest roadside market (analogue) value as was shown in the Trading Account for 1977/78 appended to that same report.

ii. The appraisal assumed that the relativity of input costs and revenues would be maintained. It would be misleading, however, to compare the revised 1985/86 Trading Account with the original appraisal. A fairer comparison would be with the 1977/78 Trading Account, upon which the original appraisal was based. This is shown at Appendix 3.2. (Revaluations of the 1977/78 opening stocks and WIP have been omitted as they have a negligible effect (<0.1% or £1,000) upon the cost of raw materials.) This shows that costs have risen at a greater rate than income over the period. These figures conceal large variations (and losses) in intervening years.

3. Prospects for Continuation

a. A financial forecast has been completed, which assumes the extremes of the most favourable and worst situation. Appendix 4.1 gives the forecast Trading Accounts with costs per m^3 shown at Appendix 4.2. The bases of the assumptions are given at Appendices 4.3 to 4.5. It should be noted that the British Coal data are their most favourable forecasts but they have now given notice to terminate our contract which expires on 28 February 1989. Even the most favourable forecast shows a considerable deficit. On past experience the most favourable British Coal forecast is not likely to be achieved. During the past year there appears to have been a general policy of combining collieries and reducing stocks on top of the general closure programme. The recently announced investment in new mines employing retreat mining technology is likely to accelerate the closure of traditional mines. Realistically, therefore it is to be expected that there will be a progressive reduction in British Coal demand for round mining timber.

i. The measurement of timber at different stages in its passage through the conversion process at BCD can result in variations between the recorded volumes, depending on the stage in the conversion process and the method of estimation used.

Throughout this report, the method used to calculate the relevant input volume is as at paragraph 3 of Appendix 2.1.1 ie Sales Volume (less Bark and Sawdust) times 100/85. This tends to underestimate input volume, which is to the 'benefit' of BCD in all the accounts and statements presented in the appendices.

ii. The data from the production forecast recently completed show that, mainly due to sales of land in North Norfolk, it is not possible to sustain an input into the depot at the 1986/87 level of 11 000 cubic metres of Cambio poles. The maximum practical level of annual supply is about 8 000 cubic metres of Cambio poles, compared to the maximum supply of 8 300 cubic metres used in the forecasts. The supply into the depot of long butts at 26 000 cubic metres in 1986/87 could be increased to 29 000 cubic metres to compensate for the shortfall in Cambio poles but this would mean that British Coal could not be supplied with the same proportions of small round mining timber. If British Coal insist on the same proportions as hitherto then either raw material will have to be purchased from private owners or produced by other FC locations. The alternative would be a lower sale volume to British Coal. These data add to the problems of finding a positive solution to the viability of Brandon Central Depot.

b. Currently the price of Woodwool is £35.00 per cubic metres FOL at BCD, the raw material from which this is cut is valued at a minimum of £34.00 per cubic metre FOL in the forest (long merchantable sawlog price). The costs of transport to the depot, peeling, cross-cutting, stacking and seasoning and loading on lorries in the depot are at least £10.00 per cubic metre. Therefore, unless the manufacturers are willing to pay in the region of £50.00 per cubic metre, this market is not an alternative. Recently the proposition was put to Torvale and they declined. The December Woodwool tender showed no upward movement in price and this market is now only supplied to the extent that it provides an outlet for the by-products inevitably produced in cutting large diameter round mining timber and reduces waste. Historically this market has been volatile and there are no indications that it would be any different in the future. Therefore Woodwool is not a viable alternative market to round mining timber nor a valuable component of the marketing strategy as envisaged in the original appraisal for modernising the depot.

c. There has been a surge in the demand for British Telecom poles and it appears that up to 5 000 cubic metres could be supplied, mainly from Thetford, but also from Cannock, Sherwood, North Lincs and Suffolk and these would be peeled in the depot. However the workload is relatively small and, despite income from bark, is insufficient to have any material effect on the viability of the enterprise.

4. Possible Closure

a. It seems highly unlikely that the depot could be sold as a going concern especially with the constraint on the volume available and the imbalance between the value of the alternative markets and round mining timber.

b. The only alternative prospect is therefore to sell the depot as an industrial development site and to weigh such gains against the cost of the inevitable redundancy. Appendices 5.1 to 5.3 show the discounted savings over the next 6 years that would arise from closure of the depot, based on minimum, average and maximum savings. Appendix 5.4 shows the prices and costs used in the cost statements including costs of redundancy. The discounted savings range from the minimum of about £300,000 to the maximum of £1,535,000, the 'average' savings being about £540,000. Clearly these estimated savings indicate that the depot should be closed as soon as contractual commitments allow. The outstanding contracts are with British Coal, which ends on 28 February 1989;

for Bark, which ends on 30 June 1989; the haulage contract, which ends on 30 September 1989; woodwool contracts, which end on 31 March 1990 and long-standing arrangements for the supply of Bungwood. None of these, in practical terms, is an insuperable constraint on the decision. Details of customers and contractors are given at Appendix 5.5.

c. Despite the indication in paragraph 4b that the depot should be closed, the Working Party considered the alternative of reducing the product mix and rationalising the sizes of pitwood produced. This would have the effect of reducing overall sales, wages, VME and other costs for the years 1987/88 to 1989/90 as shown in Appendices 6.1 to 6.3. It has been assumed that the level of orders and volumes of pitwood produced would remain the same after this rationalisation. There are grave doubts, supported by current trends, that this would be so, and figures for 1989/90 have also been given based on the volume used in the 'worst position' in Appendices 4.5 and 4.3.

i. Trading Accounts for 1987/88 to 1989/90 based on these figures are at Appendix 6.4, with costs per m^3 at Appendix 6.5. A Cost Statement (based on minimum savings) showing the discounted savings arising from the rationalisation is given at Appendix 6.6 which shows a saving of about £100,000 over the 6 year period.

d. In addition to the considerations in paragraph 4c, the introduction of the BSI quality assurance scheme presents a major difficulty. The specified top diameter limits cannot be met using current production methods. Considerable further capital investment may achieve this, but such investment would merely serve to increase the losses forecast in Appendix 6.4.

e. Closure of the depot would have repercussions on the harvesting and marketing of produce from the forest. There is a strong demand for all products and it is most unlikely that the prices would be depressed by the addition of about 10 000 cubic metres of pulpwood and 26 000 cubic metres of sawlogs. In the case of sawlogs the demand is particularly strong and it may be that the opportunity could be taken to enter into medium term contracts for about 20 000 cubic metres.

i. There would be a direct benefit to the forest from the closure of the depot from simpler harvesting systems. Depending upon the purchaser all small roundwood could be sold at roadside either as shortwood (2-3 metres) or in random lengths, snedding would not be so critical as is currently needed for the pitwood trade. Three lorries and their drivers would be redundant as would 6 hydratong tractors and their drivers. Two additional forwarders and drivers would be needed. Sorting and grading of poles would be eliminated except for British Telecom poles which would be a separate operation. It is not likely that fell, sned and cross-cut costs would increase, rather decrease if poles were sold in the lengths. The costs of extraction would be reduced in total by about £40,000 per year (allowing for the additional costs of the forwarders and their drivers).

ii. Appendix 7.1 details these and other costs, which are incorporated into the cost statement at Appendix 7.2. This statement shows the minimum discounted savings that would result in Thetford from closure of the depot. The savings contained in this statement have been combined with those in Appendix 6.6 (based on rationalisation of sizes) to produce the overall absolute <u>minimum</u> savings of £400,000 resulting from closure of the depot, shown at Appendix 7.3.

iii. Closure of the depot would enable further mechanisation of harvesting operations to be considered namely the use of harvesters where the quality of delimbing is adequate for pulp/chipwood and sawlog markets but not for round mining timber. Further mechanisation is likely to be cheaper than

the motor manual methods and with the current shortage of chain saw operators this is an option which needs to be carefully considered fairly soon.

5. Conclusions

a. The expectations of the original appraisal have never been met (paragraph 2b i refers).

b. Expenditure has in the past risen at a greater rate than income (paragraph 2b ii).

c. It is to be expected that there will be a further reduction in British Coal demand for round mining timber. A larger British Coal contract although improving the situation, would not affect the conclusion that there is no likelihood of a profit being achieved in the foreseeable future (paragraph 3a).

d. Prices for products such as woodwool and pitwood can no longer compete with the alternatives, eg sawlogs and pulp (paragraph 3b).

e. The cost statements giving savings over the next 6 years, based on current practices, show a minimum discounted saving of £300,000 as a result of the depot closure (paragraph 4b, Appendix 5.1).

f. A rationalisation of the product mix and sizes of pitwood produced, while reducing the loss per annum, does not achieve a profit and savings of £100,000 would still result from closure (paragraph 4c, Appendix 6.6).

g. Unless British Coal were willing to pay about 20% more per m^3 and accept a reduction in the range of pitwood sizes, then the rationalisation would not be practicable. In addition British Coal would be required to modify their ideas on top diameter limits and British Standards certification (paragraphs 4c and 4d).

h. Should the depot be closed, then there would be benefits to the forest in reduced sorting and grading and extraction costs (paragraph 4e).

i. The minimum discounted savings arising from closure of the depot, together with the benefits to Thetford would amount to about £400,000 over the 6 year period (paragraph 4e ii, Appendix 7.3).

6. Recommendation

The terms of reference indicate that the minimum rate of return required to justify operation of the depot is 5%. In view of the losses forecast for the foreseeable future, it is recommended that the depot be closed. The timing of closure depends upon the financial penalties of terminating contracts before the due date (paragraph 4b refers) and the amount of goodwill the Commission wishes to retain with customers and contractors.

MK

Appendix 1

REPORTS ON BRANDON CENTRAL DEPOT

1. E(E) Work Study Report No 47 - Phase I Report - May 1977 - ref 040/7/20
2. E(E) " " " No 50 - Phase II Report - March 1978 - ref 040/77/21
3. P&E Appraisal of Phase II Report - 15 May 1978
4. E(E) Work Study Report No 52 - Phase IIa Report - October 1978 - ref 040/77/21
5. P&E Appraisal of Phase IIa Report - 19 January 1979
6. H&M Summary Report - 19 January 1979 - ref 46/6/1
7. E(E) Work Study Report - Phase III Report - March 1979 - ref 040/78/11

ACCOUNTING CHANGES MADE TO 1985/86 TRADING ACCOUNT FOR BRANDON CENTRAL DEPOT

The following changes made to the Draft Trading Account as originally produced were discussed and agreed with by either Mr Turquand, Controller of Finance or Mr Hermon, Finance Division.

1. Opening Stocks and WIP revalued at Closing Stocks prices and without addition of 10% (see Appendix 2.1.1)

2. Purchases of Timber to include the cost of small roundwood production and adjustments to haulage figures to allow for full recovery of VME charges, without discounting by 7½%.

3. Closing Stocks and WIP - no addition of 10%.

4. VME to include full recovery of PDC.

5. Oncost to include arrears of pay.

6. Local Admin Expenses to include ENI and Superannuation.

7. Interest - calculated using revalued Opening Stocks and WIP.

		31 3 85	31 3 86	Mid Pt	£000's
Value of Assets	Land	20.0	20.0	20.0	
	Buildings	237.5	239.5	238.5	
	VME	401.5	375.1	388.0	
	Stocks/WIP	577.9	650.1	614.0	
				1260.5	
Interest @ 3%				= 37.8	

8. Higher Admin Expenses

These were taken as the expenses allocated to H&M FC Working and have been recalculated by excluding District admin expenses on the grounds that Brandon expenses were being accounted for twice, Thetford recover their expenses via analogue prices and that the other FDs' expenses should not be allocated between FDs. The method of calculating the proportion due to Brandon was by using the ratio of industrial man years. This has bee altered to the ratio that H&M FC Working bears to the E(E) total.

∴ Forest Estate 131.6
Conservancy 144.6
HQ 155.9

$$432.1 \times \frac{470.7}{2111.2} = 96.3$$

Less VME Oncost (63.0 - 24.8) = 38.2

58.1

REVALUATIONS OF STOCK AND WIP

1. Revaluation of 1985/86 Opening Stocks

Category	A RSPM^3 Closing £85/86	B RSP less 10% M^3	C Volume M^3	D Valuation (B x C) £
Sawlogs	15.00	13.50	100.0	1350
Fencing Materials	41.61	37.45	686.9	25724
Round Mining Timber - Peeled	46.26	41.63	1409.0	58657
Woodwool billets	34.67	31.20	2103.0	65614
Firewood	11.67	10.50	144.4	1516
Bark	12.62	11.36	600.0	6816
Sawdust	1.72	1.55	80.0	124
			5123.3	159801

2. Revaluation of 1985/86 Opening WIP

	A Closing £85/86	B Volume	D A x B £	
Total	38.85	15320	595182	
Less 10%			59518	
			535664	
Valuation				
Assessed Peeling	2.02	3465	6999	
Conversion	7.12	14504	103268	
Measure + Grade	0.50	14504	7252	
Total Deduction			117519	
Total value of WIP				418145
Stocks + WIP				577946

3. Input Volume

	M^3
Sales	47483
- Bark/Sawdust	8813
	38670
X100/85	45.5 Km^3

MK

Appendix 2.2

BRANDON CENTRAL DEPOT
ORIGINAL TRADING ACCOUNT 1985/86

	£000
Opening Stocks/WIP (Valuation + 10%)	551.0
Purchases of Timber (Discounted by 7½%)	880.8
	1,431.8
Closing Stocks/WIP (Valuation + 10%)	715.0
Cost of Raw Materials	716.8
Haulage, Materials and Supplies	220.9
Wages	243.7
VME	187.1
Prime Cost	1,368.5
Oncost	113.1
Forest Cost	1,481.6
Local Admin Expenses	60.8
	1,542.4
Income	1,807.7
Weighbridge Income	3.7
Net Contribution	269.0
Interest	37.4
Surplus/(Deficit) Before Higher Admin Expenses	231.6
Higher Admin Expenses	145.5
Surplus/(Deficit)	86.1

BRANDON CENTRAL DEPOT
REVISED TRADING ACCOUNT 1985/86

Appendix 2.3

References in Appendix 2.1		£000
1.	Opening Stocks/WIP	577.9
2.	Purchases of Timber	965.3
		1543.2
3.	Closing Stocks/WIP	650.1
	Cost of Raw Materials	893.1
	Haulage, Materials and Supplies	220.9
	Wages	243.7
4.	VME	191.4
	Prime Cost	1549.1
5.	Oncost	120.1
	Forest Cost	1669.2
6.	Local Admin Expenses	79.7
		1748.9
	Income	1807.7
	Weighbridge Income	3.7
	Net contribution	62.5
7.	Interest	37.8
	Surplus/(Deficit) before Higher Admin Expenses	24.7
8.	Higher Admin Expenses	58.1
	Surplus/(Deficit)	(33.4)

Brandon Central Depot
Revised Trading Accounts

£000s

	1980/81	1981/82	1982/83	1983/84	1984/85	1985/86
Opening Stocks/WIP	506.8	523.7	392.1	300.0	396.4	577.9
Purchases of timber	1,016.4	646.5	697.8	860.7	864.9	965.3
	1,523.2	1,170.2	1,089.9	1,160.7	1,261.3	1,543.2
Closing Stocks/WIP	609.7	401.5	290.7	356.1	464.7	650.1
Cost of Raw Materials	913.5	768.7	799.2	804.6	796.6	893.1
Haulage, Materials & Supplies	195.4	230.1	213.3	194.7	127.6	220.9
Wages	201.3	221.1	230.7	250.3	240.6	243.7
VME	203.4	182.6	149.4	217.3	195.7	191.4
Prime Cost	1,513.6	1,402.5	1,392.6	1,466.9	1,360.5	1,549.1
Oncost	75.8	90.3	99.4	93.1	94.4	120.1
Forest Cost	1,589.4	1,492.8	1,492.0	1,560.0	1,454.9	1,669.2
Local Admin Expenses	38.4	41.8	55.4	57.1	47.7	79.7
	1,627.8	1,534.6	1,547.4	1,617.1	1,502.6	1,748.9
Income	1,775.2	1,724.7	1,577.3	1,605.4	1,234.5	1,811.4
Net Contribution	147.4	190.1	29.9	(11.7)	(268.1)	62.5
Interest	38.3	40.5	29.1	33.2	35.1	37.8
Surplus/(Deficit) before Higher Admin Expenses	109.1	149.6	0.8	(44.9)	(303.2)	24.7

Appendix 2.4

Brandon Central Depot
Revised Trading Account - £/M³

£/M³

	1980/81	1981/82	1982/83	1983/84	1984/85	1985/86
Cost of Raw Materials	19.03	15.72	16.65	18.20	21.59	19.63
Haulage, Materials & Supplies	4.07	4.71	4.44	4.41	3.46	4.85
Wages	4.19	4.52	4.81	5.66	6.52	5.36
VME	4.24	3.73	3.11	4.92	5.30	4.21
Prime Cost	31.53	28.68	29.01	33.19	36.87	34.05
Oncost	1.58	1.85	2.07	2.11	2.56	2.64
Forest Cost	33.11	30.53	31.08	35.30	39.43	36.69
Local Admin Expenses	0.80	0.85	1.16	1.29	1.29	1.75
	33.91	31.38	32.24	36.59	40.72	38.44
Income	36.98	35.27	32.86	36.32	33.46	39.81
Net Contribution	3.07	3.89	0.62	(0.27)	(7.26)	1.37
Interest	0.80	0.83	0.61	0.75	0.95	0.83
Surplus/(Deficit) before Higher Admin Expenses	2.27	3.06	0.01	(1.02)	(8.22)	0.54
Input Volume over Bark KM³	48.0	48.9	48.0	44.2	36.9	45.5

Appendix 2.5

BRANDON CENTRAL DEPOT

1977/78 ACCOUNTS

£000s

	Trading Accounts	Forecasts (1)	Forecasts (2)
Opening Stock	376.5	-	-
Purchases (+Haulage In)	896.6	255.8	358.2
	1,273.1	255.8	358.2
Closing Stock	476.7	-	-
Cost of Raw Materials	796.4	255.8	358.2
Haulage, Materials, Supplies	126.2	134.4	169.6
Wages	125.4	114.6	132.4
VME	85.7	101.4	122.9
Prime Cost	1,133.7	606.2	783.1
Oncost	49.7	45.9	53.0
Forest Cost	1,183.4	652.1	836.1
Local Admin Expenses	11.5	-	-
	1,194.9	652.1	836.1
Income	1,253.5	1,210.1	1,659.8
Net Contribution	58.6	558.0	823.7
Interest	23.6	-	-
Surplus before Higher Admin Expenses	35.0	558.0	823.7
Volume: Purchased (Km^3)	53.0	50.0	70.0
: Sales	43.9	42.5	62.5
Input	48.7	50.0	70.0
Surplus £/m^3	£0.72	£11.16	£11.77

BRANDON CENTRAL DEPOT

	£000s		£/m³		% Increase
	1977/78	1985/86	1977/78	1985/86	on £/m³ pa
Cost of Raw Materials	796.4	893.1	16.35	19.63	2.3
Haulage etc	126.2	220.9	2.59	4.85	8.2
Wages	125.4	243.7	2.58	5.36	9.6
VME	85.7	191.4	1.76	4.21	11.5
Prime Costs	1,133.7	1,549.1	23.28	34.05	4.9
Oncosts	49.7	120.1	1.02	2.64	12.6
Forest Costs	1,183.4	1,669.2	24.30	36.69	5.3
Local Admin Expenses	11.5	79.7	0.24	1.75	28.2
	1,194.9	1,748.9	24.54	38.44	5.8
Income	1,253.5	1,811.4	25.74	39.81	5.6
Net Contribution	58.6	62.5	1.20	1.37	1.7
Interest	23.6	37.8	0.48	0.83	7.1
Surplus before Higher Admin Expenses	35.0	24.7	0.72	0.54	(3.5)
Input Volume over Bark km³			48.7	45.5	(0.8)

BRANDON CENTRAL DEPOT
TRADING ACCOUNTS - FORWARD POSITIONS

£000s

	Best Position			Worst Position		
	1987/88	1988/89	1989/90	1987/88	1988/89	1989/90
Cost of Raw Materials	1083	1184	1213	1041	1192	1102
Haulage, Materials and Supplies	300	315	331	330	363	399
Wages	340	340	340	345	373	402
VME	265	278	293	270	297	327
Prime Cost	1988	2117	2177	1986	2225	2230
Oncost	35	37	39	40	44	48
Forest Cost	2023	2154	2216	2026	2269	2278
Local Admin Expenses	85	89	94	90	99	109
	2108	2243	2310	2116	2368	2387
Income	1907	2057	2060	1686	1808	1490
Net Contribution	(201)	(186)	(250)	(430)	(560)	(897)
Interest	40	40	40	40	40	40
Surplus/(Deficit) before Higher Admin Expenses	(241)	(226)	(290)	(470)	(600)	(937)
Higher Admin Expenses	64	67	71	64	70	77
Surplus/(Deficit)	(305)	(293)	(361)	(534)	(670)	(1014)

Appendix 4.1

LH

BRANDON CENTRAL DEPOT
TRADING ACCOUNTS - £M³

	Best Position			Worst Position		£M³
	1987/88	1988/89	1989/90	1987/88	1988/89	1989/90
Cost of Raw Materials	26.35	28.46	30.79	27.25	30.33	33.70
Haulage Materials and Supplies	7.30	7.57	8.40	8.64	9.24	12.20
Wages	8.27	8.18	8.63	9.03	9.49	12.29
VME	6.45	6.68	7.43	7.07	7.56	10.00
Prime Cost	48.37	50.89	55.25	51.99	56.62	68.19
Oncost	0.85	0.89	0.99	1.05	1.12	1.47
Forest Cost	49.22	51.78	56.24	53.04	57.74	69.66
Local Admin Expenses	2.07	2.14	2.39	2.35	2.52	3.33
	51.29	53.92	58.63	55.39	60.26	72.99
Income	46.40	49.45	52.28	44.14	46.01	45.56
Net Contribution	(4.89)	(4.47)	(6.35)	(11.25)	(14.25)	(27.43)
Interest	0.97	0.96	1.01	1.05	1.02	1.22
Surplus/(Deficit) before Higher Admin Expenses	(5.86)	(5.43)	(7.36)	(12.30)	(15.27)	(28.65)
Higher Admin Expenses	1.56	1.61	1.80	1.68	1.78	2.36
Surplus/(Deficit)	(7.42)	(7.04)	(9.16)	(13.98)	(17.05)	(31.01)
Volume Sold (Input Volume over Bark) KM³	41.1	41.6	39.4	38.2	39.3	32.7

Appendix 4.2

BRANDON CENTRAL DEPOT
Forecast Purchases 1987/88-1989/90

Product	Best Position												Worst Position											
	1987/88				1988/89				1989/90				1987/88				1988/89				1989/90			
	% Vol	Km³	£	Value	% Vol	Km³	£	Value	% Vol	Km³	£	Value	% Vol	Km³	£	Value	% Vol	Km³	£	Value	% Vol	Km³	£	Value
Cat I	-	-	-	-	-	-		-	-	-	-	-	12	4.6	34.50	158.7	13	5.1	37.95	193.5	14	4.6	41.74	192.0
Cat II	36	14.8	30.66	453.8	36	15.0	32.99	494.8	36	14.2	35.50	504.1	31	11.8	30.66	361.8	31	12.2	33.73	411.5	31	10.1	37.10	374.7
Merch	21	8.6	29.06	249.9	21	8.7	31.24	271.8	21	8.3	33.58	278.7	15	5.7	29.06	165.6	15	5.9	31.97	188.6	15	4.9	35.16	172.3
Pulp	43	17.7	16.67	295.1	43	17.9	18.34	328.3	43	16.9	20.17	340.9	42	16.1	16.67	268.4	41	16.1	18.67	300.6	40	13.1	20.91	273.9
Total	100	41.1	24.30	998.8	100	41.6	26.32	1094.9	100	39.4	28.52	1123.7	100	38.2	24.99	954.5	100	39.3	27.84	1094.2	100	32.7	30.97	1012.9
+Haulage			2.05	84.3			2.15	89.4			2.26	89.0			2.25	86.0			2.48	97.5			2.72	88.9
Grand Total			26.35	1083.1			28.47	1184.3			30.78	1212.7			27.24	1040.5			30.32	1191.7			33.69	1101.8

Appendix 4.3

NOTES TO APPENDIX 4.3

1. Percentage Volumes

Worst Position shows gradual increase in Cat I logs. Best assumes no Cat I with Cat II and Merchantable increased.

2. Volumes

Input volumes were calculated from sales volumes, less bark and sawdust, the resulting figure assumed to be 85% of the required input eg:-

		Best			Worst			Km^3
		1987/88	1988/89	1989/90	1987/88	1988/89	1989/90	
	Sales Volumes	44.9	45.4	43.5	42.5	43.4	37.8	
Less	Bark and Sawdust	10.0	10.0	10.0	10.0	10.0	10.0	
	Net Volumes	34.9	35.4	33.5	32.5	33.4	27.8	
$\times \frac{100}{85}$		41.1	41.6	39.4	38.2	39.3	32.7	

3. £ per m^3 - Analogue Prices at Roadside over bark includes deduction for marking, measuring and loading costs.

Current prices were increased per annum as follows:

	Current Price	Best %	Worst %	
Cat I	£34.50	6.1(A)	10	
Cat II	£30.66	7.6(A)	10	
Merch	£29.06	7.5(E)	10	
Pulp	£16.67	10 (E)	12	
Haulage		5 (E)	10	(1985/86 price of £1.86 used as starting point)

The Best percentage increases are an average of the years 1982/83 to current (A) or estimated (E) and the worst increases are estimated.

BRANDON CENTRAL DEPOT
Forecast Expenditure 1987/88–1989/90

Item	Best Position			Worst Position		
	1987/88	1988/89	1989/90	1987/88	1988/89	1989/90
Haulage, Materials etc	300	315	331	330	363	399
Wages	340	340	340	345	373	402
VME	265	278	293	270	297	327
	905	933	964	945	1033	1128
Oncost	35	37	39	40	44	48
	940	970	1003	985	1077	1176
Admin Expenses	85	89	94	90	99	109
	1025	1059	1097	1075	1176	1285

NOTES

1. The actuals for 1985/86 and the 1987/88 budget are:

	85/86	87/88	% Increase pa	Best %	Worst %
Haulage, Materials etc	220.9	369.9ø	29.4	5	10
Wages	243.7	342.1	18.5	NIL*	8
VME	191.4	266.3	18	5	10
	656.0	978.3	22.1		
Oncost	120.1	37.0	-55.5	5	10
	776.1	1015.3	14.4		
Admin Exp	79.7	87.6	4.8	5	10
	855.8	1102.9	13.5		

(ø original, n adjusted)
(* 4% Increase less 1 man each year)

2. The position is complicated by the oncost change, therefore the 87/88 budget was used as the starting point for both the best and worst positions, before applying the percentages shown.

3. Interest was assumed level at £40,000 and higher admin expenses increased as per local admin expenses.

BRANDON CENTRAL DEPOT
Forecast Sales 1987/88-1989/90

Product	Best Position									Worst Position								
	1987/88			1988/89			1989/90			1987/88			1988/89			1989/90		
	Km^3	£	Value	Km^3	£	Value	Km^3	£	Value	Km^3	£	Value	Km^3	£	Value	Km^3	£	Value
Pitwood	21.0	60.86	1278.1	22.5	63.66	1432.4	21.6	66.59	1438.3	18.9	57.22	1081.5	20.2	59.85	1209.0	14.9	59.85	891.8
Woodwool	7.5	34.50	258.8	6.5	35.40	230.1	5.5	36.32	199.8	7.5	34.11	255.8	7.5	34.11	255.8	7.5	34.11	255.8
Fencing	2.0	45.77	91.5	2.0	50.35	100.7	2.0	55.38	110.8	2.0	45.77	91.5	1.7	47.88	81.4	1.5	50.08	75.1
Bungwood	1.5	48.67	73.0	1.5	50.18	75.3	1.5	51.73	77.6	1.5	47.06	70.6	1.5	48.52	72.8	1.5	50.02	75.0
Sawlogs	0.6	33.58	20.1	0.6	34.35	20.6	0.6	35.14	21.1	0.4	25.77	10.3	0.4	26.36	10.5	0.4	26.97	10.8
Special Poles	0.3	120.00	36.0	0.3	132.00	39.6	0.3	145.20	43.6	0.3	100.00	30.0	0.3	105.00	31.5	0.3	110.25	33.1
Firewood	1.5	11.92	17.9	1.5	13.72	20.6	1.5	15.79	23.7	1.5	10.92	16.4	1.5	12.01	18.0	1.5	13.21	19.8
Wastewood	0.5	11.80	5.9	0.5	13.51	6.8	0.5	15.47	7.7	0.4	11.80	4.7	0.3	12.98	3.9	0.2	14.28	2.9
Bark	9.0	13.60	122.4	9.0	14.23	128.1	9.0	14.88	133.9	9.0	13.60	122.4	9.0	13.60	122.4	9.0	13.60	122.4
Sawdust	1.0	3.05	3.0	1.0	3.19	3.2	1.0	3.34	3.3	1.0	3.05	3.0	1.0	3.05	3.0	1.0	3.05	3.0
Totals	44.9	42.47	1906.7	45.4	45.32	2057.4	43.5	47.35	2059.8	42.5	39.68	1686.2	43.4	41.67	1808.3	37.8	39.41	1489.7

Appendix 4.5

NOTES to Appendix 4.5

1. Volumes

a. Pitwood assumes Wentwood volumes for NCB transferred to Brandon 1988/89. Worst position assumes 90% uplift and 1989/90 best position reduced by 5 Km^3 before applying 90%.

b. Woodwool - Best position includes Center Parc Project at Sherwood and assumes reducing volume. Worst position increases volumes.

c. Bungwood and Special Poles - estimated volumes based on current trends and no change between best and worst positions.

d. Firewood, Bark and Sawdust - current position maintained for best and worst positions.

e. Fencing and Wastewood - best estimate is a steady state, worst assumes reducing market.

f. Sawlogs - best position assumes current position, worst based on lower demand.

2. £/Km^3

a. Prices in 1987/88 taken as latest prices available at end March 1987 (L), best estimate (E) or by applying average percentage increases from 1982/83-1985/86 to 1985/86 prices (A), as shown below.

Product	Best Price	Worst Price	Best % or Worst %	
Pitwood	£60.86(E)	£57.22(A)	4.6(A)	NIL(E)
Woodwool	£34.50(E)	£34.11(A)	2.6(A)	NIL(E)
Fencing	£45.77(L)	£45.77(L)	10.0(E)	4.6(A)
Bungwood	£48.67(L)	£47.06(A)	3.1(A)	3.1(A)
Sawlogs	£33.58(L)	£25.77(A)	2.3(A)	2.3(A)
Poles	£120.00(E)	£100.00(E)	10.0(E)	5.0(E)
Firewood	£11.92(A)	£10.92(L)	15.1(A)	10.0(E)
Wastewood	£11.80(A)	£11.80(A)	14.5(A)	10.0(E)
Bark	£13.60(E)	£13.60(E)	4.6(E)	NIL(E)
Sawdust	£ 3.05(L)	£ 3.05(L)	4.6(E)	NIL(E)

LH

Cost Statement - Minimum Savings from Closure £000s

	Item	87/88	88/89	89/90	90/91	91/92	92/93	TOTAL
Cost of Closure	VME Deferred Purchase - Radios (10+3)					-6	-2	-8
	- JCB						-31	-31
	Sale of VME - 4 Volvos			+5				+5
	Sale of Mill - Scrap			+40				+40
	Sale of Land - Basic Value			+15				+15
	Annual Compensation (+5%)		-80	-165	-165	-165	-165	-740
	Compensation Lump Sum (+5%)		-240	-255				-495
	Pension Lump Sum (+5%)		-55	-62				-117
	Total Cost	-	-375	-422	-165	-171	-198	-1331
Current Position	Best Trading Position	-241	-226	-290	-290	-290	-290	-1627
	VME Purchase - Radios (13)			-8				-8
	- JCB			-31				-31
	Total	-241	-226	-329	-290	-290	-290	-1666
	Net Savings of Closure	+241	-149	-93	+125	+119	+92	+335
	Discounted at 5%	+1.000	0.952	0.907	0.864	0.823	0.784	
	Discounted Savings	+241	-142	-84	+108	+98	+72	+293

Cost Statement - Average Savings from Closure £000s

	Item	87/88	88/89	89/90	90/91	91/92	92/93	TOTAL
Cost of Closure	VME Deferred Purchase - Volvo (1)				-39			-39
	- Radios (10+3)					-6	-2	-8
	- JCB						-31	-31
	Sale of VME - 3 Volvos			+4				+4
	Sale of Mill as going concern			+225				+225
	Sale of Land - Basic Value			+15				+15
	Annual Compensation (Average)		-60	-157	-157	-157	-157	-688
	Compensation Lump Sum (Average)		-175	-296				-471
	Pension Lum Sum (Average)		-40	-72				-112
	Total Cost	-	-275	-281	-196	-163	-190	-1105
Current Position	Best Trading Position	-241	-226	-290	-290	-290	-290	-1627
	VME Purchase - Volvo (1)			-39				-39
	- Radios (13)			-8				-8
	- JCB			-31				-31
	Total	-241	-226	-368	-290	-290	-290	-1705
	Net Savings	+241	-49	+87	+94	+127	+100	+600
	Discounted at 5%	x1.000	0.952	0.907	0.864	0.823	0.784	
	Discounted Savings	+241	-47	+79	+81	+105	+78	+537

Appendix 5.2

Cost Statement - Maximum Savings from Closure £000s

	Item	87/88	88/89	89/90	90/91	91/92	92/93	TOTAL
Cost of Closure	VME Deferred Purchase - Volvo (1)				-39			-39
	- Radios (10+3)					-6	-2	-8
	- JCB						-31	-31
	Sale of VME - 3 Volvos			+4				+4
	Sale of Mill - Scrap			+50				+50
	Sale of Land - Development Value			+1203				+1203
	Annual Compensation (-5%)		-40	-149	-149	-149	-149	-636
	Compensation Lump Sum (-5%)		-110	-336				-446
	Pension Lump Sum (-5%)		-25	-80				-105
	Total Cost	-	-175	+692	-188	-155	-182	-8
Current Position	Best Trading Position	-241	-226	-290	-290	-290	-290	-1627
	VME Purchase - Volvo (1)			-39				-39
	- Radios (13)			-8				-8
	- JCB			-31				-31
	Total	-241	-226	-368	-290	-290	-290	-1705
	Net Savings	+241	+51	+1060	+102	+135	+108	+1697
	Discounted at 5%	x1.000	0.952	0.907	0.864	0.823	0.784	
	Discounted Savings	+241	+49	+961	+88	+111	+85	+1535

Appendix 5.3

Brandon Central Depot

1. VME

a.

Main Items	Date of Purchase	Historic Cost	Replacement Cost	Book Value	Deferred to
Radios (10)	04/03/83	£548	£604	£378	91/92
Radios (3)	08/06/84	£581	£602	£467	92/93
JCB420HL (1)	25/11/85	£31,392	£31,392	£29,666	92/93
Volvo 4300 (1)	02/06/79	£29,514	£38,731	£1,937	89/90
Volvo 4300 (2)	12/06/80	£32,575	£38,731	£1,937	89/90
Volvo 4300 (1)	10/06/81	£33,120	£38,731	£7,843	90/91

b.

Sale of VME	Estimated Price
Volvos (4)	£5,000
Other	£500
Mill - a. Scrap	£40,000-£50,000
b. Going Concern	£200,000-£250,000

2. Land

a. Basic Value £15,000 (50 acres @ £300)

b. Development Value £1,203,000 (40 acres @ £30,000; 10 acres @ £300)

3. Redundancy	Average per Individual	Range +/- 5%
Annual Compensation Payment	£3,932	= £3,735-£4,13(
Compensation Lump Sum	£11,796	=£11,206-£12,3{
Pension Lump Sum	£2,793	= £2,653-£2,93?

4. Note It is assumed in the cost statements that the Depot would not replace VME until beyond their book life, ie after 1992/93.

BCD CUSTOMERS AND CONTRACTORS

Products	Customer	Approximate No of Years Supplied	1986/87 Volume (M^3) Supplied ex BCD	Estimated Percentage of Customers Requirements	Remarks
Pitwood	British Coal	40	21330	25	
Woodwool	Torvale	30+	2401	25	Building Slab & Packaging
	RMC	5+	2804	75	" " "
	Calders & Grandidge	5+	2112	75	Packaging (Prev Wigginton & Milner)
Bungwood	British Bung	20+	761	100	
	Moorland Woodturning	20+	543	100	
PSR	Calders (Brandon)	10+	28	20	
	Calders & Grandidge	5+	385	80	
	Chase Fencing Supplies (Pallet Handling)	20+	298	50	Prev. Chase Sawmills
	Clarkes of Walsham	5+	925	75	
Bark	Camland	10+	2186	U/K	
	D Rolph	10+	5721	90	
Wastewood to Charcoal	W Scott	30+	454	100	Prev. Valentine Wood
	Contractor				
Pitwood Haulage	K Peckham	7+ (inc 6 month break)	22634	-	3 Year Tendered Contract 2 years to run

Appendix 5.5

BRANDON CENTRAL DEPOT

RATIONALISATION OF SIZES

A. FORECAST SALES

Product	1987/88			1988/89			1989/90			1989/90 (Worst Vol)		
	K m^3	£	Value	K m^3	£	Value	K m^3	£	Value	K m^3	£	Value
Pitwood	21.0	60.86	1,278.1	22.5	63.66	1,432.4	21.6	66.59	1,438.3	14.9	66.59	992.2
Woodwool	7.1	34.50	245.0	7.6	35.40	269.0	7.3	36.32	265.1	5.1	36.32	185.2
Special Poles	0.3	120.00	36.0	0.3	132.00	39.6	0.3	145.20	43.6	0.3	145.20	43.6
Firewood	0.9	11.92	10.7	0.9	13.72	12.3	0.9	15.79	14.2	0.6	15.79	9.5
Wastewood	0.3	11.80	3.5	0.3	13.51	4.1	0.3	15.47	4.6	0.2	15.47	3.1
Bark	7.8	13.60	106.1	8.4	14.23	119.5	8.1	14.88	120.5	5.6	14.88	83.3
Sawdust	0.7	3.05	2.1	0.8	3.19	2.6	0.8	3.34	2.7	0.5	3.34	1.7
Total	38.1	44.13	1,681.5	40.8	46.07	1,879.5	39.3	48.07	1,889.0	27.2	48.48	1,318.6

Note All prices as per the 'best' position given in Appendix 4.5

BRANDON CENTRAL DEPOT

RATIONALISATION OF SIZES

B. FORECAST PURCHASES

Product	1987/88				1988/89			1989/90			1989/90 (Worst Vol)		
	% Vol	K m^3	£	Value	K m^3	£	Value	K m^3	£	Value	K m^3	£	Value
Cat II	45	15.7	30.66	481.4	16.7	32.99	550.9	16.1	35.50	571.6	11.2	35.50	397.6
Merch	25	8.7	29.06	252.8	9.3	31.24	290.5	9.0	33.58	302.2	6.2	33.58	208.2
Pulp	30	10.4	16.67	173.4	11.2	18.34	205.4	10.7	20.17	215.8	7.4	20.17	149.3
Total	100	34.8	26.08	907.6	37.2	28.14	1,046.8	35.8	30.44	1,089.6	24.8	30.45	755.1
Haulage			2.05	71.3		2.15	80.0		2.76	80.9		2.26	56.0
Grand Total			28.13	978.9		30.29	1,126.8		32.70	1,170.5		32.71	811.1

Note All prices as per the 'best' position given in Appendix 4.3

Appendix 6.2

BRANDON CENTRAL DEPOT
RATIONALISATION OF SIZES

C. Forecast Expenditure £000's

Item	1987/88	1988/89	1989/90	
Haulage, Materials etc	250	263	276	
Wages	254	264	275	
VME	245	257	270	
	749	784	821	
Oncost	26	27	29	
	775	811	850	
Local Admin Expenses	80	84	88	
	855	895	938	

Notes
1. Haulage, Materials, Supplies for 1987/88 reduced from figure in Appendix 4.4 in same ratio as reduction in overall volume.
2. Wages reduced from 37½ men to 28 men.
3. VME assumes reductions in peeling, etc.
4. Oncost reduced pro-rata to wages.
5. Local Admin Expenses assumes ½ CO less.
6. Later years updated as per 'best' position in Appendix 4.4.

BRANDON CENTRAL DEPOT
RATIONALISATION OF SIZES

TRADING ACCOUNTS

£000's

	1987/88	1988/89	1989/90	1989/90 (Worst Volume)
Cost of Raw Materials	979	1,127	1,170	811
Haulage, Materials, Supplies	250	263	276	276
Wages	254	264	275	275
VME	245	257	270	270
Prime Cost	1,728	1,911	1,991	1,632
Oncost	26	27	29	29
Forest Cost	1,754	1,938	2,020	1,661
Local Admin Expenses	80	84	88	88
	1,834	2,022	2,108	1,749
Income	1,682	1,880	1,889	1,319
Net Contribution	(152)	(142)	(219)	(430)
Interest	40	40	40	40
Surplus/(Deficit) before Higher Admin Expenses	(192)	(182)	(259)	(470)

eo

BRANDON CENTRAL DEPOT
RATIONALISATION OF SIZES
TRADING ACCOUNTS - £/M^3

	1987/88	1988/89	1989/90	(Worst 1989/90 Volume)
Cost of Raw Materials	28.13	30.29	32.68	32.70
Haulage, Materials, Supplies	7.18	7.07	7.71	11.13
Wages	7.30	7.10	7.68	11.09
VME	7.04	6.91	7.54	10.89
Prime Cost	49.68	51.37	55.61	65.81
Oncost	0.75	0.73	0.81	1.17
Forest Cost	50.40	52.10	56.42	66.98
Local Admin Expenses	2.30	2.26	2.46	3.55
	52.70	54.36	58.88	70.53
Income	48.33	50.54	52.76	53.19
Net Contribution	(4.37)	(3.82)	(6.12)	(17.34)
Interest	1.15	1.07	1.12	1.61
Surplus/(Deficit) before Higher Admin Expenses	(5.52)	(4.89)	(7.24)	(18.95)
Input Volume over Bark KM^3	34.8	37.2	24.8	35.8

Cost Statement of Minimum Savings of Closure based on Rationalisation of sizes

£000's

	Item	87/88	88/89	89/90	90/91	91/92	92/93	Total
Cost of Closure	Deferred VME Purchase - Radios (10+3)					-6	-2	-8
	JCB						-31	-31
	Sale of VME - 4 volvos			5				+5
	Sale of Mill - Scrap			40				+40
	Sale of Land - Basic Value			15				+15
	Annual compensation - +5%		-80	-165	-165	-165	-165	-740
	Compensation Lump Sum - +5%		-240	-255				-495
	Pension Lump Sum - +5%		-55	-62				-117
	Total Cost		-375	-422	-165	-171	-198	-1331
Proposed Position	Trading Account	-192	-182	-259	-259	-259	-259	-1410
	VME Purchase - Radios (13)			-8				-8
	JCB			-31				-31
	Total	-192	-182	-298	-259	-259	-259	-1449
	Net Savings	+192	-193	-124	+94	+88	+61	+118
	Discounted at 5% x	1.000	0.952	0.907	0.864	0.823	0.784	
	Discounted Savings	+192	-184	-112	+81	+72	+48	+97

Appendix 6.6

THETFORD

1. Capital VME

a. Items

		Replacement Cost £	Book Value £	Disposal Year
Lorries (3)	1.	62,966	48,836	92/93
	2.	62,966	46,058	92/93
	3.	62,966	46,043	92/93
		188,898		
Hydratong Tractors (6)	2x	13,175	1,707	87/88
	2x	13,175	1,714	87/88
	2x	13,175	3,335	88/89
		79,050		

b. Sale of VME

Hydratong Tractors 6x £2,300 = £13,800

c. Purchase of VME

Forwarders 2x £90,560 = £181,120

2. Redundancy (as per Appendix 5.4)

6 Tractor Drivers + 3 Lorry Drivers - 2 Forwarder Operators

	Average	Range + /-5%
Annual Compensation	£ 3,932	£ 3,735-£ 4,130
Compensation Lump Sum	£11,796	£11,206-£12,386
Pension Lump Sum	£ 2,793	£ 2,653-£ 2,932

3. Running Costs

a. Hydratong Tractors

PDC £5.50 per hour
x 1,800 hours
x 6 Tractors

£59,400

Drivers 6 x £10,000 = 60,000 (including oncost)

£119,400

b. Lorries

PDC	£14.70 per hour
x	1,800 hours
x	3 Lorries
	£79,380 Recovered from Brandon

Drivers 3 x £10,000 = £30,000 (including oncost)

c. Forwarders

PDC	£13.50 per hour
x	2,000 hours
x	2 Forwarders
	£54,000
Operators 2 x £11,000 =	£22,000 (including oncost)
	£76,000

d. Income and other expenditure assumed to be the same whether selling to Brandon or non-FC.

e. all costs increased by 5% per annum for later years.

Cost Statement of effects upon Thetford FD - Minimum Savings from Closure of BCD

£000's

	Item	87/88	88/89	89/90	90/91	91/92	92/93	Total
Cost of Closure of BCD	Sales of Hydratong Tractors (6)			+ 14				+ 14
	VME Purchase - Forwarders (2)			- 181				- 181
	Cost of Running Forwarders			- 76	- 80	- 84	- 88	- 328
	Annual Compensation (+ 5%)		- 14	- 29	- 29	- 29	- 29	- 130
	Compensation Lump Sum (+ 5%)		- 49	- 50				- 99
	Pension Lump Sum (+ 5%)		- 11	- 12				- 23
	Total Cost		- 74	- 334	- 109	- 113	- 117	- 747
Current Position	VME Purchase Hydratong Tractors (6)		- 53	- 26				- 79
	Cost of Lorry Drivers (3)	- 30	- 31	- 33	- 35	- 36	- 38	- 203
	Cost of Hydratongs	- 119	- 125	- 131	- 138	- 145	- 152	- 810
	Total	- 149	- 209	- 190	- 173	- 181	- 190	- 1,092
	Net Savings	+ 149	+ 135	- 144	+ 64	+ 68	+ 73	+ 345
	Discounted at 5% x	1.000	0.952	0.907	0.864	0.823	0.784	
	Discounted Savings	+ 149	+ 129	- 131	+ 55	+ 56	+ 57	+ 315

Appendix 7.2

Cost Statement of Minimum Savings of Closure based on Rationalisation of sizes and including effects upon Thetford

		87/88	88/89	89/90	90/91	91/92	92/93	£000 Total
Costs of Closure	1. BCD (Appendix 6.6)	-	- 375	- 422	- 165	- 171	- 198	- 1,331
	2. Thetford (Appendix 7.2)	-	- 74	- 334	- 109	- 113	- 117	- 747
	Total Cost	-	- 449	- 756	- 274	- 284	- 315	-2,078
Proposed/Current Position	1. BCD (App 6.6)	- 192	- 182	- 298	- 259	- 259	- 259	-1,449
	2. Thetford (Appx 7.2)	- 149	- 209	- 190	- 173	- 181	- 190	-1,092
	Total	- 341	- 391	- 488	- 432	- 440	- 449	-2,541
	Net Savings	+ 341	- 58	- 268	+ 158	+ 156	+ 134	+ 463
	Discounted at 5% x	1.000	0.952	0.907	0.864	0.823	0.784	
	Discounted Savings	+ 341	- 55	- 243	+ 137	+ 128	+ 105	+ 413

REPORT ON PROGRESS TOWARDS CLOSURE OF BRANDON CENTRAL DEPOT

AT 24 JANUARY 1988

STAFF

Transfer to Research Branch	1)	
Left for other employment	7)	
Leaving for other employment 29.1.88	3)	16
Leaving for other employment 26.2.88	3)	
Want to leave earliest opportunity	2)	
No date fixed - no other employment yet.		18 (8 age 50-59, 4 age 60+. All to be retired)

Foreman now qualifies for consideration for recruitment to FO IV.

1 AO transferred to Santon Downham Workshop) Casual AA re-employed to cover for
1 AO to be phased into Workshop by March 31) as long as necessary.

Forester, Chief Forester - to be decided

Machinery

Peeler Plant - sold by tender 22.1.88 - £91000

Sawmill and other fixed and semi mobile machines - tender due 29.1.88 for removal from 1.4.88.

Total number items 70. Total number items declared available for disposal 24.

Wheeled plant not included in tenders and not to be retained by FC to be sold at Auction as normal.

Weighbridge to continue in use as long as office is manned - much interest in weighbridge on site.

Site - objective is to leave a clear site apart from office, mess building, service bay, fuel installation, weighbridge and switchgear building.

E.E.B. contacted to discuss rundown and cessation of 3 phase electricity supply. Suggested supply line retained until decision on site made.

Residential planning application to Breckland District Council rejected.

Contracts etc

Pitwood - production complete 2 February. Bundling, load and dispatch complete by 19 February. All orders fulfilled, no stock, total volume supplied in year 15000m^3.

Woodwool - total balances to March 31 1990 7673m^3, offered to customers. Probable requirement 6173m^3. Stock at 24.1.88 1245m^3.
∴ Production required, 4928m^3 should be completed by 26 February.
Minimum volume to be loaded FY 88-89 5000m^3.

Bungwood - production complete, 19 loads to deliver by end of March of 30 loads (700m^3) agreed to supply on closure announcement. Gives both customers sufficient supplies for 12 months production.

Bark - production ended. Camland have completed collection. Balance outstanding 2526m^3. Discussion re compensation continues. D Rolph 220m^3 to collect stocks,(to clear) mainly unmilled. Balance outstanding 2200m^3. Claims unlikely.

PSR - 35,000 stakes in stock, all spoken for to be cleared by 19 February, leaving supply to 3 main customers at 80 to 85% of agreed figures for the year.
Attempts to sell 15,000 unpeeled mixed conifer blanks continue.

2' 000

Peeled Cambio Poles - remaining stock sold to clear by March 11.

Peeled Long Butts - some balance likely for sale once Woodwool conversion complete.

Wastewood - charcoal burner building stock, demand for firewood remains high.

B.C.D. CLOSURE - ANTICIPATED TIMETABLE

Position at 25.1.88

Peeling completed

Conversion to small diameter pitwood, bungwood and PSR completed.

Secondary processing of stakes completed.

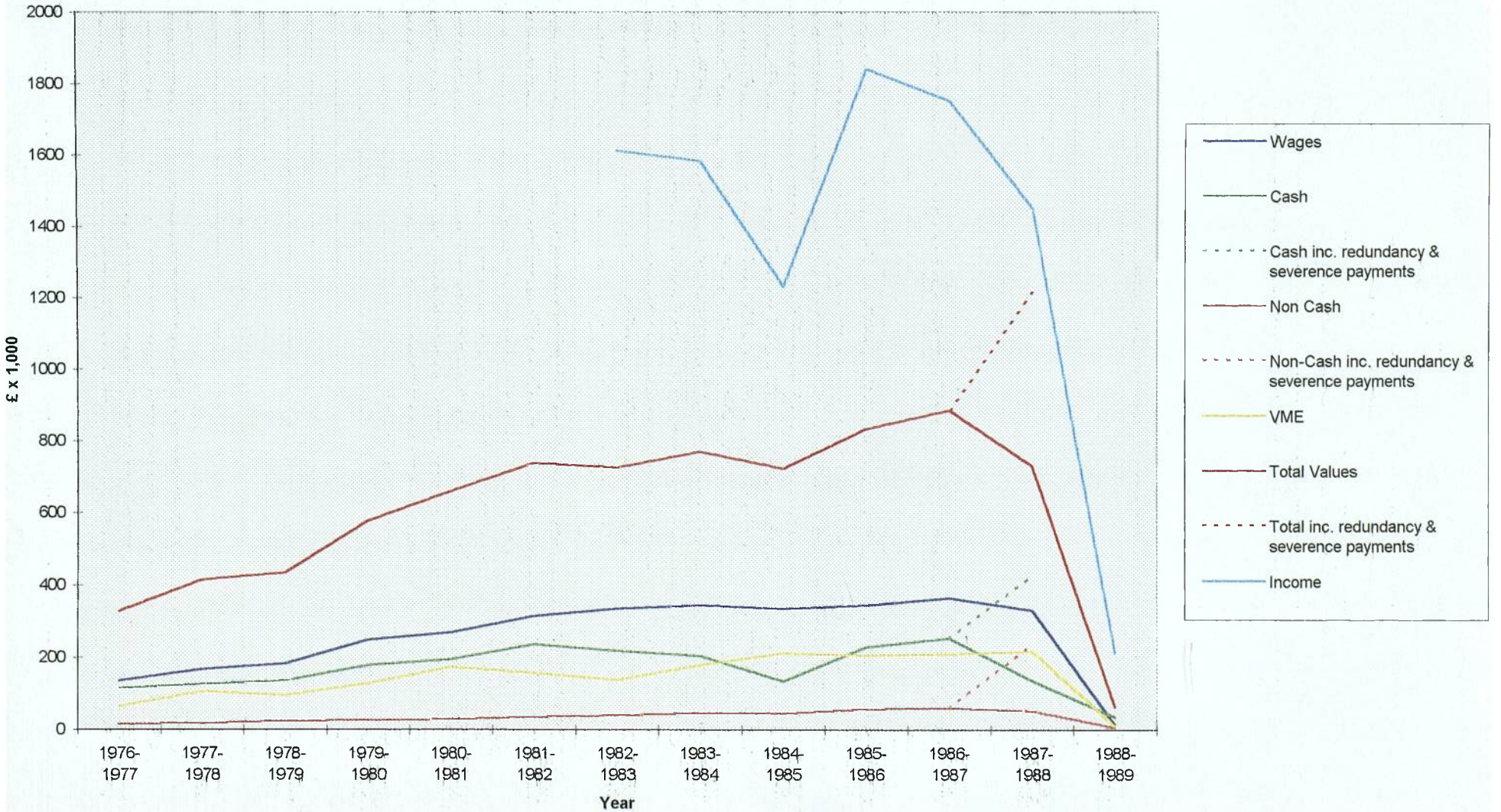
TIMETABLE

February 2	Pitwood production completed.
February 19	Pitwood bundling, loading and delivery completed. All pitwood orders fulfilled stock cleared. PSR stocks cleared (peeled only) Release 3 men? Bark stocks nil
February 26	Woodwool production complete. Sell any remaining peeled Long Butts. Release any men with jobs to go to and more if necessary to reduce staff to numbers required to load customers and clear site.
February 29	Foreman to forest to widen experience.
March 11	Clear peeled Cambio stock, already sold.
March 25	Complete dispatch of bungwood. Woodwool stock 5000m^3 2.0m only. Transfer 2nd AO permanently to Workshop. Clear site as far as practicable.

B Griggs
26.1.88.

Appendix 12c

Brandon Central Depot
Expenditure FY1976/77 to FY1988/89 Income FY1982/83 to FY 1988/89



Appendix 12d

BRANDON, SUFFOLK

BRANDON CENTRAL DEPOT

41.5 ACRE DEVELOPMENT SITE

OFFERED FOR SALE FREEHOLD BY

THE FORESTRY COMMISSION

B I D W E L L S

BRANDON SUFFOLK

BRANDON CENTRAL DEPOT

41.5 ACRE DEVELOPMENT SITE

OFFERED FOR SALE FREEHOLD

BY

THE FORESTRY COMMISSION

BRANDON

Brandon, in the heart of East Anglia, is an expanding town on the Norfolk/Suffolk border. It has a present population of 7,330.

It is located some 6 miles to the East of Thetford on the A1065 midway between Norwich and Cambridge. It is close to the A11 trunk road which is presently being upgraded to dual carriageway in many locations. Cambridge is 32 miles away, Kings Lynn 24 miles and London 83 miles.

The growth of East Anglia has been considerable and the region has had the greatest population increase in all the English regions since the 1960's. It grew by more than 5% between 1981 and 1986 and is expected to increase by a further 12% by the year 2001.

BRANDON CENTRAL DEPOT

The site is located on the A1065, Mundford Road, directly to the north of the town centre and adjacent to the main Norwich/Cambridge railway line.

Although Brandon town is located in Suffolk, Brandon Central Depot is over the border in the County of Norfolk.

The Depot comprises an attractive cleared site in rural suroundings totalling some 49.7 acres bounded by the existing forest to the north and the railway line to the south. It was first developed in 1947 to supply the National Coal Board with pit props and mining timber but in recent years also produced wood wool, bark for commercial suppliers, fencing stakes and rustic poles.

The site offered for sale is edged on the enclosed plan and has a developable area of 41.5 acres. The hatched area adjacent to the site of St Thomas a Beckett's Priory is to be reserved as open space. This comprises 8.2 acres and although not formally on offer can be made available.

The site has the benefit of a number of buildings, these comprising an office with Weighbridge adjacent at the entrance to the site, a vehicle repair workshop and a mess-room.

The site is virtually flat and a geotechnical site investigation

carried out in January 1989 indicates that the typical soil conditions are up to 600mm of made ground over sand/gravel sub-soil.

PLANNING

The entire site was granted outline planning consent on 9th March 1989, Ref: 3/88/1219, for "Redevelopment of depot for business park and open space", the business park to encompass classes B1, B2 and B8 of the Use Classes Order to reflect the mixed use of the depot in the past.

Prospective purchasers should be aware that a residential element was included in the original planning application. This element was withdrawn however, on the grounds that a decision to refuse the entire consent was anticipated.

In the light of the recent boundary changes however, we believe that within the next 10 years it is possible that the site will be incorporated in the Brandon town boundary and this is likely to improve the chances of development for uses other than industry.

We also believe that this site, by its woodland nature in the centre of East Anglia, would be suitable for a number of types of leisure development, subject to planning consent being forthcoming.

The site falls under the jurisdiction of the following planning authorities:-

1. Norfolk County Council
   County Hall
   Martineau Lane
   Norwich
   NR1 2DH

   Tel: 0603 611122

2. Breckland District Council
   District Planning Department
   The Guildhall
   East Dereham
   Norfolk
   NR19 1EE

   Tel: 0362 695333 (F.A.O. C.K. Smith Esq)

3. Weeting Parish Council
   c/o Parish Clerk, Mrs S. Drummond
   "Alvina"
   Rectory Lane
   Weeting
   Norfolk

   Tel: 0842 812179

Authorities that have been consulted in the granting of the planning permission include:-

1. Suffolk County Council
   St Helen Court
   County Hall
   Ipswich
   Suffolk
   IP4 2JS

   Tel: 0473 230000

2. Forest Heath District Council
   College Heath Road
   Mildenhall
   Bury St Edmunds
   Suffolk

   Tel: 0638 716000

3. Highways Department
   Norfolk County Council
   Martineau Lane
   Norwich
   NR1 2DH

   Tel: 0603 611122 (F.A.O. Miss M. Grimes)

4. Highways Department Southern Area
   Norwich County Council
   Industrial Estate
   Norwich Road
   Watton
   Thetford
   IP25 6DR

   Tel: 0953 881122 (F.A.O. A. Bowers Esq)

5. Anglian Water Authority
   Yare House
   62/64 Thorpe Road
   Norwich
   NR1 1SA

   Tel: 0603 761761 (F.A.O. B. Huthwaite Esq)

HIGHWAYS AND SERVICES

Consultants Hannah Reed & Associates have been commissioned to produce a feasibility study in respect of enabling works at Brandon Central Depot. Aspects that have been considered include, highways and new access road, foul sewerage, surface water disposal, water supply, electricity, gas and telecom. A copy of the report will be made available to seriously interested parties but we would summarise their findings as follows:-

It is proposed that a new 7.3 metre wide access road, and junction onto Mundford Road, are to be constructed to serve an initial

development of 25 acres. The road will be suitable for extensions to serve additional development of further land to the north.

Foul drainage will be via a pumping station located centrally in the intitial industrial development, with a rising main passing along Mundford Road, under the railway line and discharging to the existing public sewerage system in Bridge Street, Brandon.

Surface water drainage from industrial unit roofs will discharge to individual soakaways. All other drainage, such as run-off from roads and forecourts, will be collected by a piped drainage system, to outfall to the culvert under the railway on the southern boundary of the site. Improvements to the downstream watercourse, for a distance of approximately 500 metres, will also be required.

Water supply will be from the existing public supply currently available 200 metres south-west of the proposed access into the site on Mundford Road.

Electricity will be supplied from an existing substation located on the site. Eastern Electricity have indicated that their standard connection charges will apply in general, but special requirements will be charged accordingly.

No gas supply is available at present.

As part of the feasibility report prepared, the cost of full infrastruture works for an initial development of 25 acres has been quantified.

CONSULTANTS

The following practices have been involved in the compilation of information necessary to offer the site for sale:-

1. Planning

   Terence Povey Esq, BA BARCH MA FRTPI RIBA MBIM
   Chartered Town Planner and Architect
   14 Quebec Road
   Dereham
   Norfolk
   NR19 2DR

   Tel: 0632 693760

   P. Symmonds Esq
   Planning Department
   Bidwells
   Trumpington Road
   Cambridge

   Tel: 0223 841841

2. Highways and Services

J.A. Caesar Esq MA (Cantab) CEng MICE MIHT
Hannah Reed & Associates
Consulting Engineers
Telford House
Station Road
Cambridge
CB1 2JF

Tel: 0223 68523

3. Geotechnical Engineers

G.J.T. Southgate Esq, BSc CEng MICE
R.S. Associates Ltd
Oldhaven House
Tomo Industrial Estate
Creeting Road
Stowmarket
Suffolk
IP14 5AY

4. Development Consultants

A.W. Noyes Esq, BSc EstMan ARICS
Bidwells
Trumpington Road
Cambridge
CB2 2LD

Tel: 0223 841841

LETTINGS AND INCOME

1. Terms are presently being finalised with Harris Coldair, a subsidiary of Harris Distribution Ltd and Transport Development Group plc, for the grant of a 6 month licence outside the protection of the Landlord and Tenant Act 1954 for the mess-room and an area of land of some 1.2 acres directly adjacent, close to the site entrance. The equivalent annual rent of £23,500, inclusive of rates has been agreed. The land will be used for the purpose of a vehicle depot and the building for ancillary mess/office facilities.

2. The weighbridge at the entrance to the site presently takes approximately 25 lorry "weigh-ins" per day for which each individual charge is £3. We calculate that the gross income is in the region of £20,000 per annum.

TERMS

The site is offered for sale on one of the following bases:-

1. Freehold sale of the 41.5 acre site at a price in the region of £3 million.

2. Sale of one or more parts of the site either freehold or on a long leasehold basis at a price in the region of £125,000 per acre.

A sale will be subject to the following conditions:-

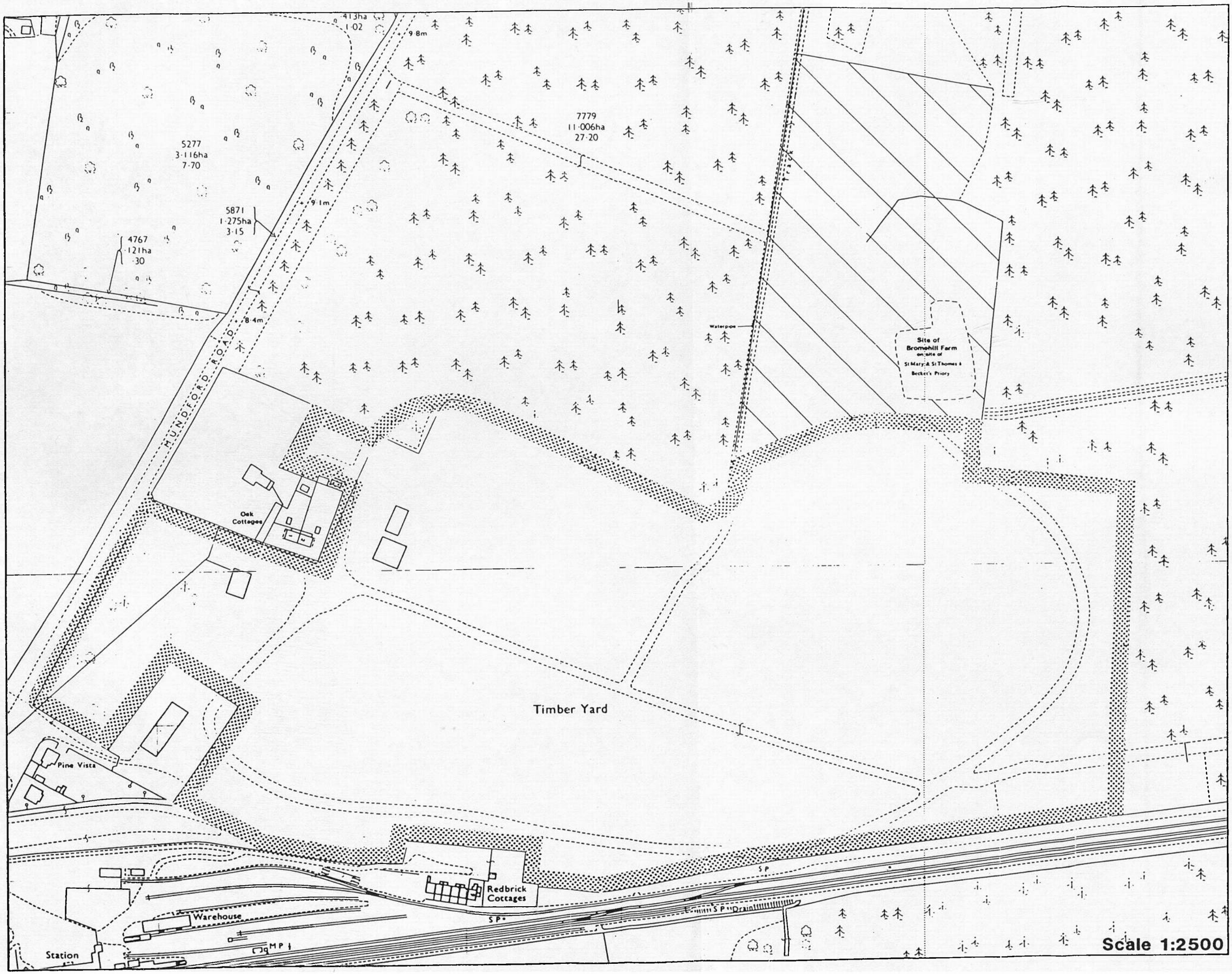
1. In the event of a sale of part, the purchaser will be required to construct a new access and associated services to an adoptable standard, the details of which we have established with the appropriate authorities.

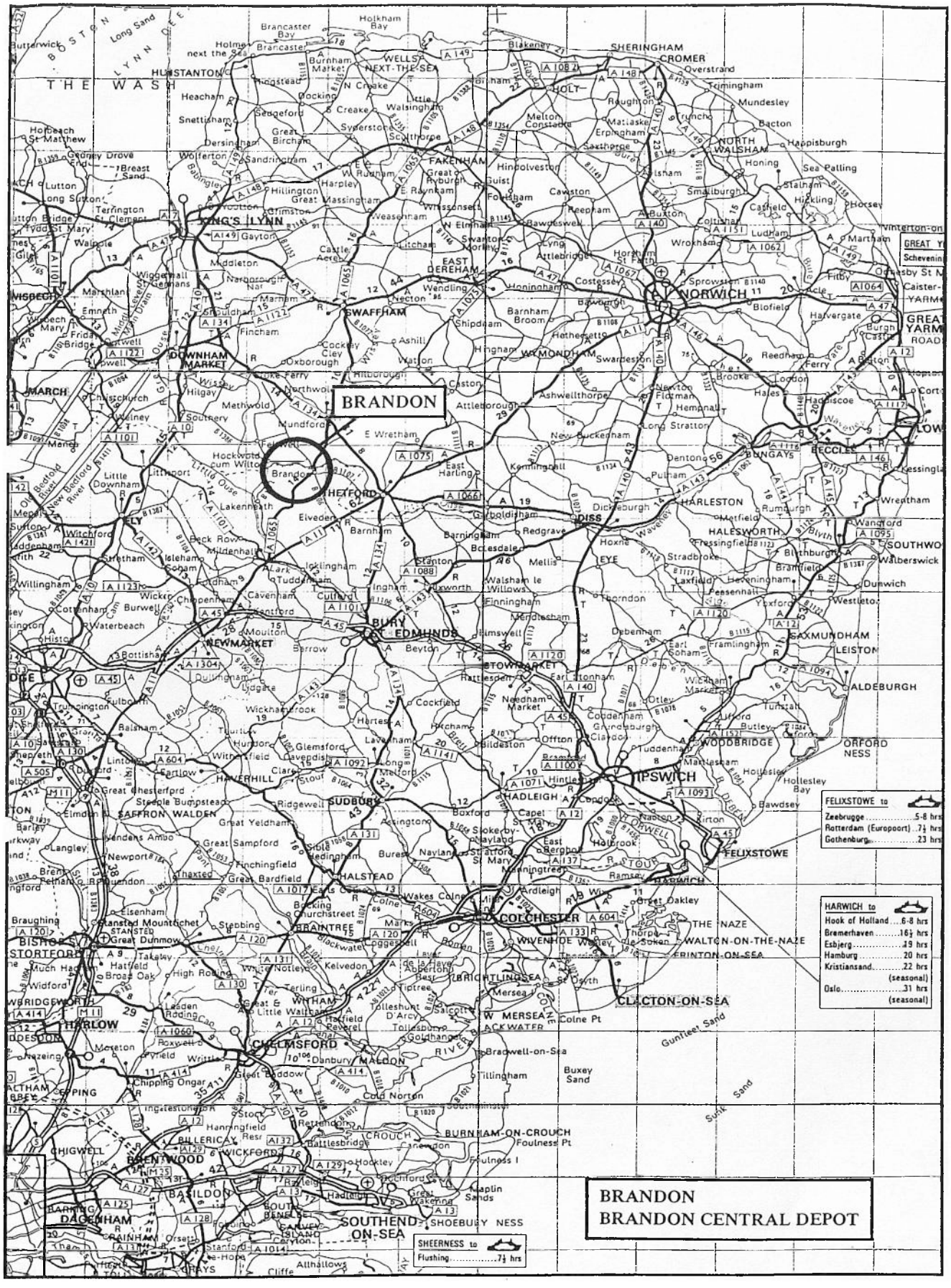
2. The reservation of adequate access to the owners and occupiers of Nos. 1 and 2 Oak Cottages and to the site and premises owned by Mike Edwards Engineering Ltd.

3. The erection of a 6ft chain link security fence with concrete posts on the woodland boundary.

VIEWING

Arrangements to be made through these offices, (ref: A W Noyes or Miss Sara Lane). Contact must be made with the Site Agent, Mr Barry Griggs at the entrance office before driving onto the site.


4·13ha
1·02
9·8m
7779
11·006ha
27·20
5277
3·116ha
7·70
9·1m
5871
1·275ha
3·15
4767
·121ha
·30
8·4m
HUNDFORD ROAD
Waterpipe
Site of
Bromehill Farm
on site of
St Mary's & St Thomas à
Becket's Priory
Oak
Cottages
Timber Yard
Pine Vista
Redbrick
Cottages
SP
SP Drain
Warehouse
MP 1
Station
Scale 1:2500


BRANDON
BRANDON CENTRAL DEPOT
FELIXSTOWE to
Zeebrugge ..... 5-8 hrs
Rotterdam (Europoort) .. 7¼ hrs
Gothenburg ..... 23 hrs
HARWICH to
Hook of Holland .... 6-8 hrs
Bremerhaven ..... 16½ hrs
Esbjerg ..... 19 hrs
Hamburg ..... 20 hrs
Kristiansand ..... 22 hrs
(seasonal)
Oslo ..... 31 hrs
(seasonal)
SHEERNESS to
Flushing ..... 7½ hrs
THE WASH
HUNSTANTON
WELLS-NEXT-THE-SEA
SHERINGHAM
CROMER
HOLT
KING'S LYNN
FAKENHAM
EAST DEREHAM
NORWICH
SWAFFHAM
DOWNHAM MARKET
WYMONDHAM
MARCH
THETFORD
DISS
ELY
NEWMARKET
BURY ST EDMUNDS
STOWMARKET
HALESWORTH
BECCLES
BUNGAY
SAXMUNDHAM
ALDEBURGH
IPSWICH
WOODBRIDGE
FELIXSTOWE
HADLEIGH
SUDBURY
HAVERHILL
SAFFRON WALDEN
HALSTEAD
COLCHESTER
BRAINTREE
BISHOP'S STORTFORD
HARLOW
CHELMSFORD
MALDON
BURNHAM-ON-CROUCH
CLACTON-ON-SEA
WALTON-ON-THE-NAZE
FRINTON-ON-SEA
BRIGHTLINGSEA
WEST MERSEA
BRENTWOOD
BILLERICAY
WICKFORD
BASILDON
SOUTHEND-ON-SEA
SHOEBURY NESS
DAGENHAM
CHIGWELL
HARLESTON
EYE
SOUTHWOLD
DUNWICH
LEISTON
ORFORD NESS
Guntleet Sand
Swin Sand
Buxey Sand