RIVER RHYMNEY WILDLIFE

HABITAT IMPROVEMENTS

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March 1990

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1. OBJECTIVE

To improve the range of wildlife habitats associated with the main River Rhymney by :

a) undertaking a survey of the river corridor in order to describe the principal riparian habitats and determine the needs for habitat creation or improvement

b) identifying specific sites suitable for habitat creation or improvement and reaching agreement with landowners and other interested parties

c) implementing appropriate projects

2. INTRODUCTION

2.1 General description

The River Rhymney rises on Odyn Fach within the Brecon Beacons National Park at an altitude of 475m.It flows south through a small reservoir and then down a narrow steep-sided valley until it reaches Caerphilly.From here it meanders along a wider valley before reaching the tidal limit at Rumney,Cardiff.The total length of the river is 58km and the catchment covers an area of 220km2.

2.2 River management

The upper part of the catchment was considerably affected by heavy industry and associated urbanisation during the 19th century.Much of the original industry has now gone and a range of new developments have replaced them,which are generally less damaging to the environment.However,the upper catchment is still affected by the relics of the old industries in the form of culverts,walls,steep banks and tips on the river.

More recent river management has involved flood defence schemes to protect new industrial and urban development.A considerable part of the main river downstream of Ystrad Mynach has been engineered to some degree,generally the construction of earth embankments and blockstone revetment.Major schemes include;Ystrad Mynach,Cwmlas,Bedwas House,Pant Glas,Machen and Llanrumney.Other reaches,including the upper catchment, have smaller scale blockstone works.

Land use downstream of Machen is predominantly agricultural and because of the quality of the land there is a considerable amount of arable farming as well as stock rearing.The land has therefore been drained and improved right to the river's edge.

2.3 Existing river conservation work

In general, river engineering schemes result in the loss of riparian trees,especially if embankments are built.In the majority of the River Rhymney schemes trees have been planted in mitigation,which goes some way towards reducing the impact.For example,at Ystrad Mynach 1400 native trees and shrubs were planted behind the embankment and at Pant

Glas 1300 trees and shrubs planted where they would not be affected by maintenance work.

Other recent measures which have improved in-channel habitats are the construction of blockstone weirs and groynes.These have been built in connection with both major schemes,such as Ystrad Mynach,and with maintenance work,such as New Tredegar.

In the area of Rhymney town the Local Authorities have recently undertaken extensive tree-planting as part of a policy of general environmental improvements in the valley.This has included planting on the steep river banks in some areas and there are further improvements proposed.

3. RIVER CORRIDOR HABITATS

3.1 General description of habitats

An ecological survey of the Rhymney Valley in 1978 (Anon 1978) examined 173 sites throughout the catchment and produced a species list of flowering plants and birds.However,only 9 of these sites were associated with the main river; 4 being marshes and 5 being wooded riverbanks.The majority of these 9 sites were considered to be of particular biological,educational or amenity value but no attempt was made to identify habitats that were rare or required protection in the catchment.

The Rhymney Riverside Study,undertaken by R.V.D.C. in 1988 provides an useful description of the river corridor in considering the route of a potential riverside footpath and associated environmental improvement. This enabled the present survey to be targetted to some extent and also identified potential sites for projects.

The upper catchment,between Llechryd and New Tredegar,is considerably affected by the industrial past with long lengths of culvert (8.5% of reach),steep artificial banks and walls (29% of bank length).This has resulted in the lack of riparian trees and shrubs and a sparse vegetation dominated by grasses.There are a few,very small oak woodlands adjacent to the river and a few,small areas of wetland, concentrated in the Abertysswg area.

With the exception of the Bargoed area,the middle reaches have a greener,more rural appearance although there is still considerable industrial and urban development.The river corridor itself,however,is less affected by this development than the upper reaches and consequently there is an almost continuous line of riparian trees, principally alder,with more small woodlands.In general the adjacent farmland is improved pasture and provides few wetland habitats other than a few small grazed wet pastures/marshes dominated by the soft rush Juncus effusus.

The lower reaches,downstream of Caerphilly,also have an almost complete line of trees;again mainly alder but with willows becoming more common downstream.Land-use here is predominantly agriculture but with arable production important as well as pasture.There are few wetlands due to land improvement and drainage.

There are relatively few sites that provide good holt or lying-up sites for otters due to a lack of large specimens of oak,ash or sycamore on the riverbank and a lack of dense undergrowth of bramble or thorn.

3.2 Improvement needs

The following general observations were made regarding riparian habitats in the valley :-

a) Areas of open water,other than the river itself,were rare on the valley bottom.

b) Marshes tended to be small,dominated by soft rush and affected by stock.

c) Riparian trees were often limited to a single row of even-aged alders with little evidence of regeneration.Because of grazing pressures these trees are often leaning over the river and therefore susceptible to floods,river maintenance works and collecting unsightly rubbish.

d) Many woodlands and thickets adjacent to the river are affected by stock and therefore have poor field and shrub layers.

e) There is little in the way of good cover for otters.

4. PROJECTS

The initial survey indicated that certain habitats were scarce,notably wetlands throughout the catchment,riparian tree cover in the upper catchment and suitable bankside vegetation for otters in the lower reaches.

Initially 15 potential sites for improvement were identified.Following consultation with Rhymney Valley District Council,Rhymney Comprehensive School,Royal Society for Nature Conservation,Glamorgan and Gwent Wildlife Trusts,Nature Conservancy Council,Glamorgan/Gwent FFWAG,Forestry Commission and a number of private landowners,this was reduced to 10,distributed from Rhymney in the north to Michaelston-y-Fedw in the south.

The locations of the projects are shown in Fig.1 and summary details in Table 1.Full details of the individual projects are appended.

5. REFERENCES

Anon 1978 Flora and Fauna of the Rhymney Valley R.V.D.C.

Fig. 1 Project locations

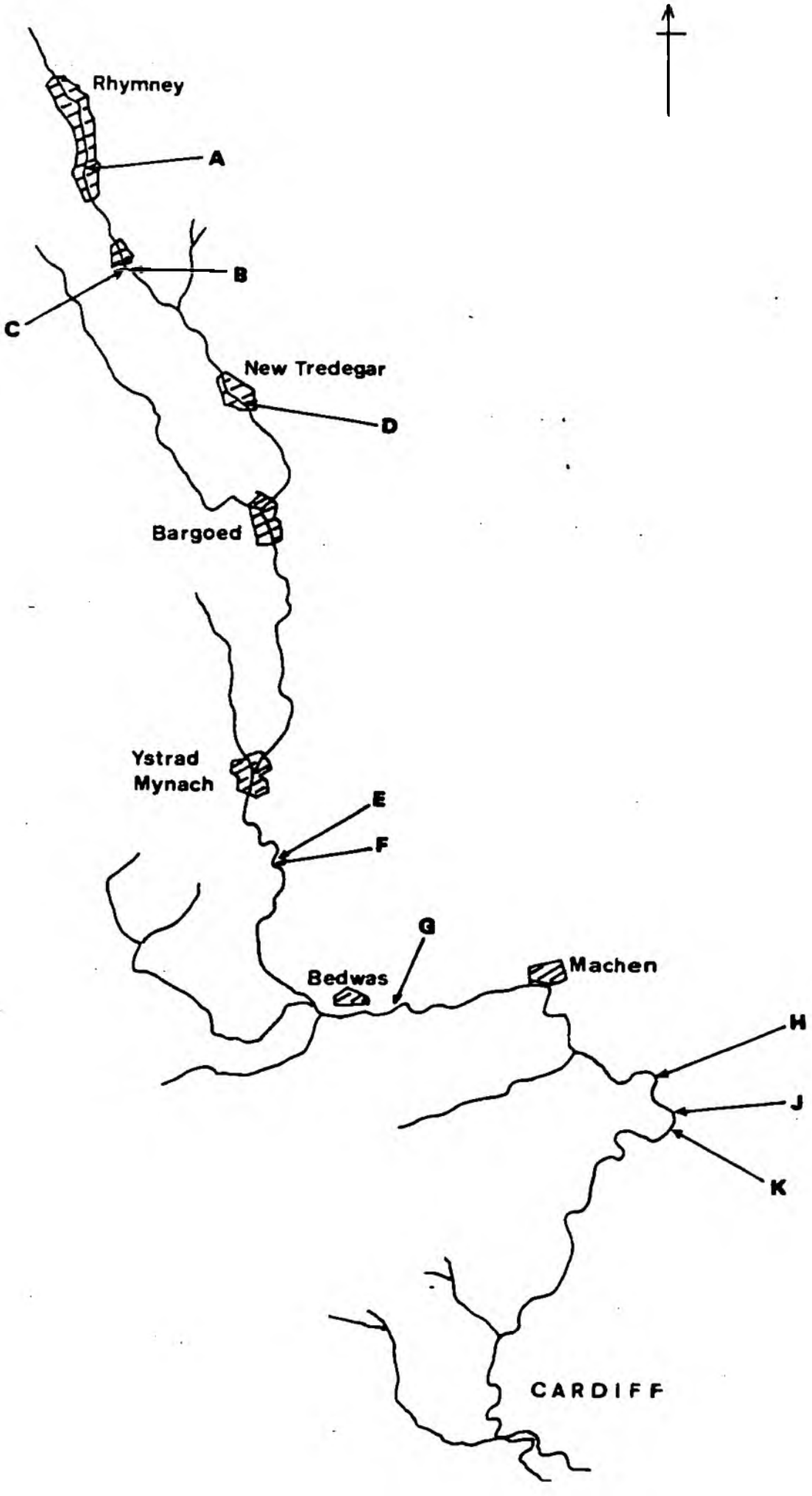


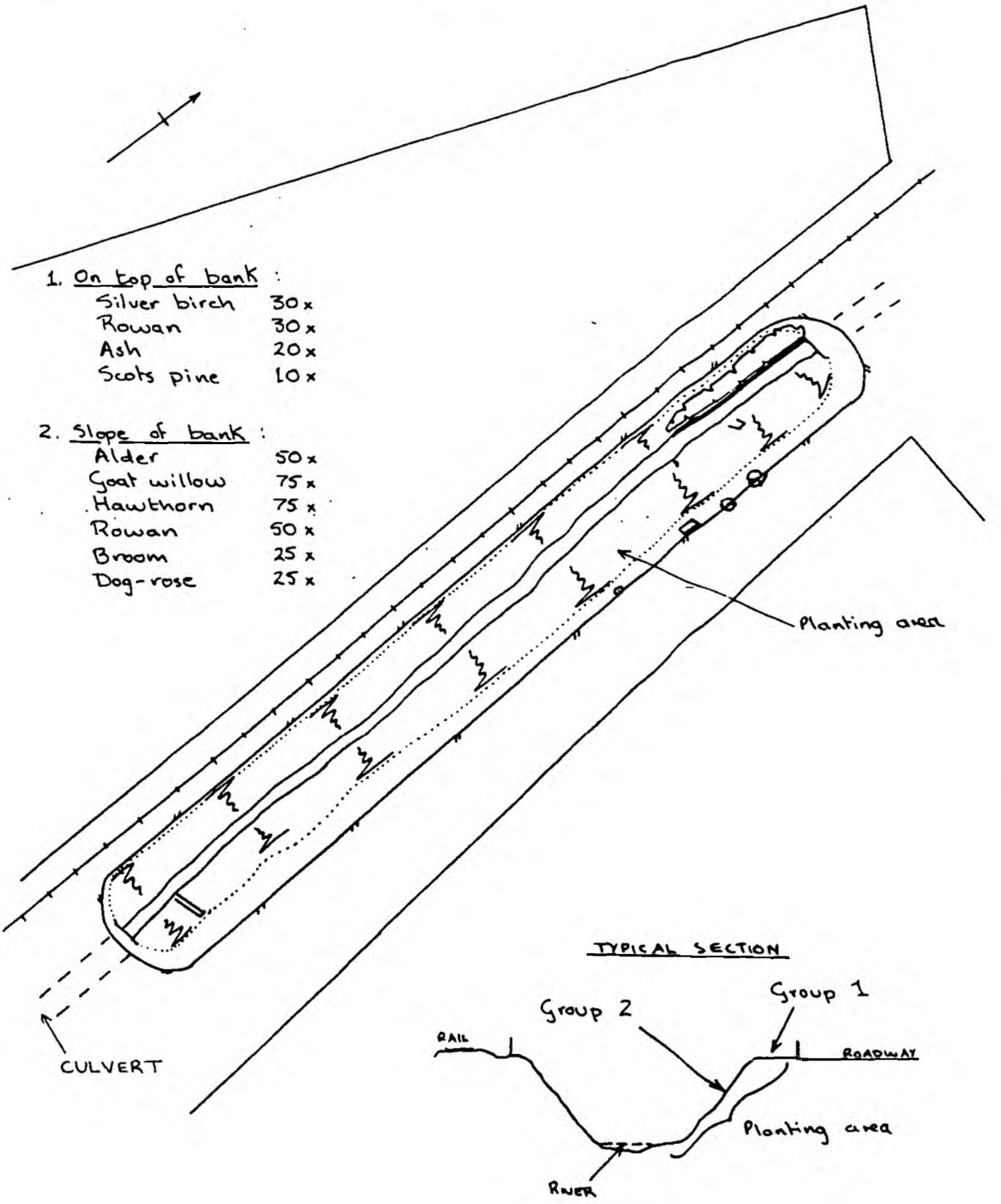
Table 1 SUMMARY DETAILS OF PROJECTS

PROJECT	LOCATION	NGR	DESCRIPTION
A	Rhymney,Maerdy Indust. Estate	SO113073	Tree and shrub planting
B	Rhymney Comprehensive School	SO121058	Excavation of shallow pond or marsh;fencing
C	"	SO121059	Tree and shrub planting; fencing
D	New Tredegar	SO145027	Tree and shrub planting; fencing
E	Ffrwd Farm,Maesycymmer	ST154918	Excavation of pond/marsh; tree and shrub planting; fencing
F	"	ST153918	Fencing off riparian woodland;nest boxes
G	Trethomas	ST187886	Excavation of shallow pond
H	Plas Machen	ST238869	Construction of stick-pile holt;repair fence
J	Park Wood	ST246862	Construction of stick-pile holt;shrub planting
K	Bridge Farm,Michaelston	ST245861	Fencing

APPENDIX

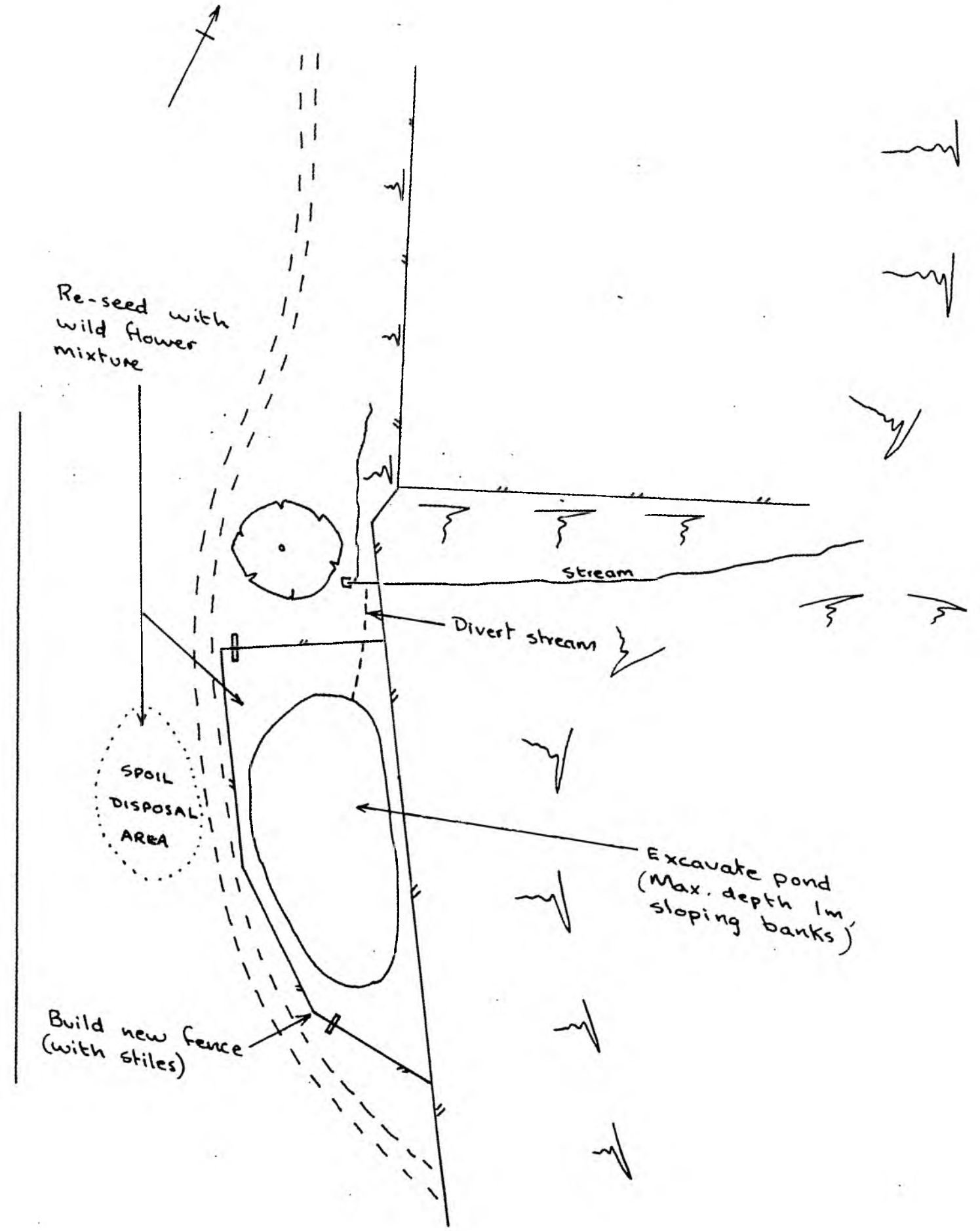
Details of individual projects A - K

Project A Maerdy Industrial Estate, Rhymney SO 113073

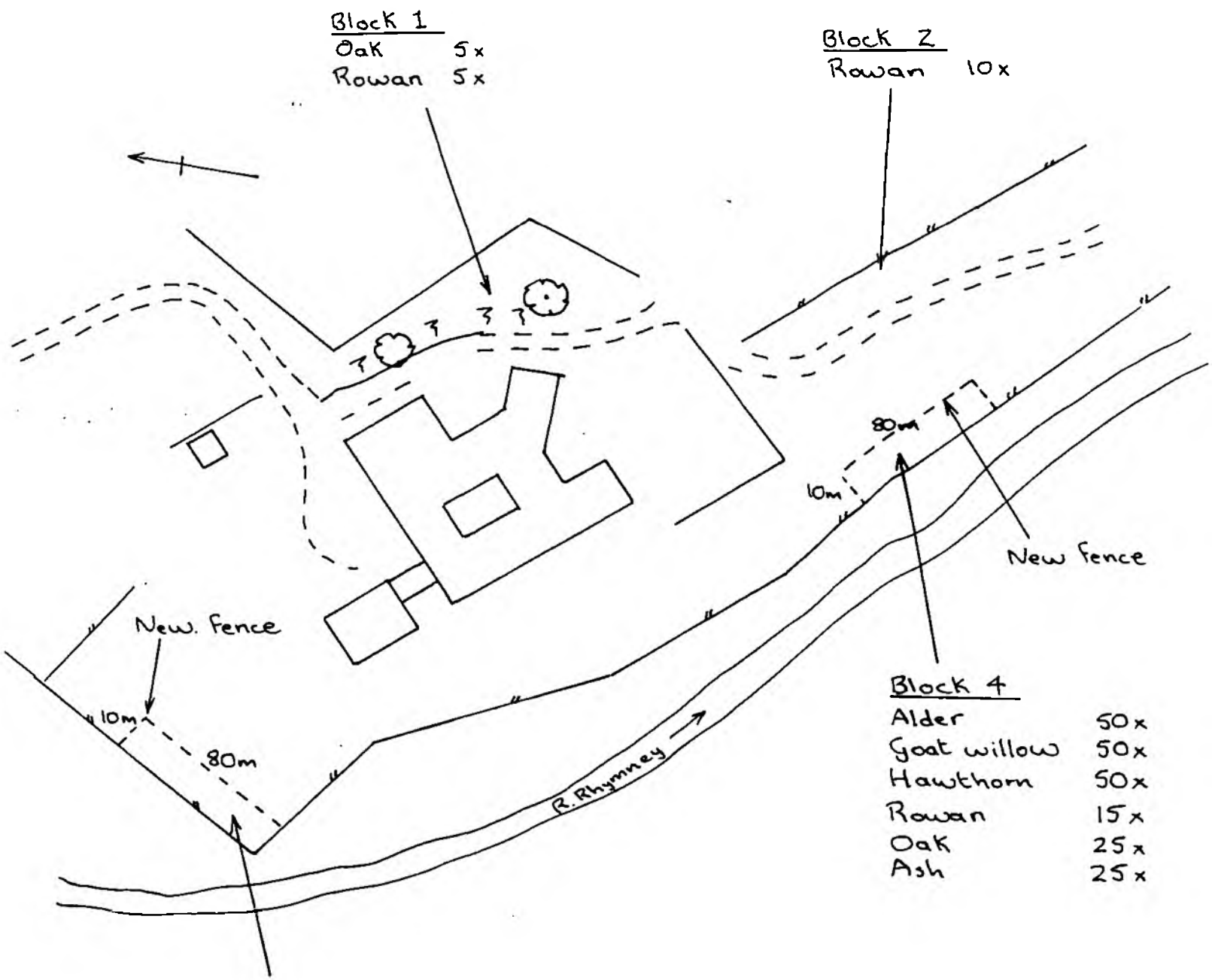


TYPICAL SECTION

Project B Rhymney Comprehensive School SO 121058



Project C Rhymney Comprehensive School SO121059



Block 4

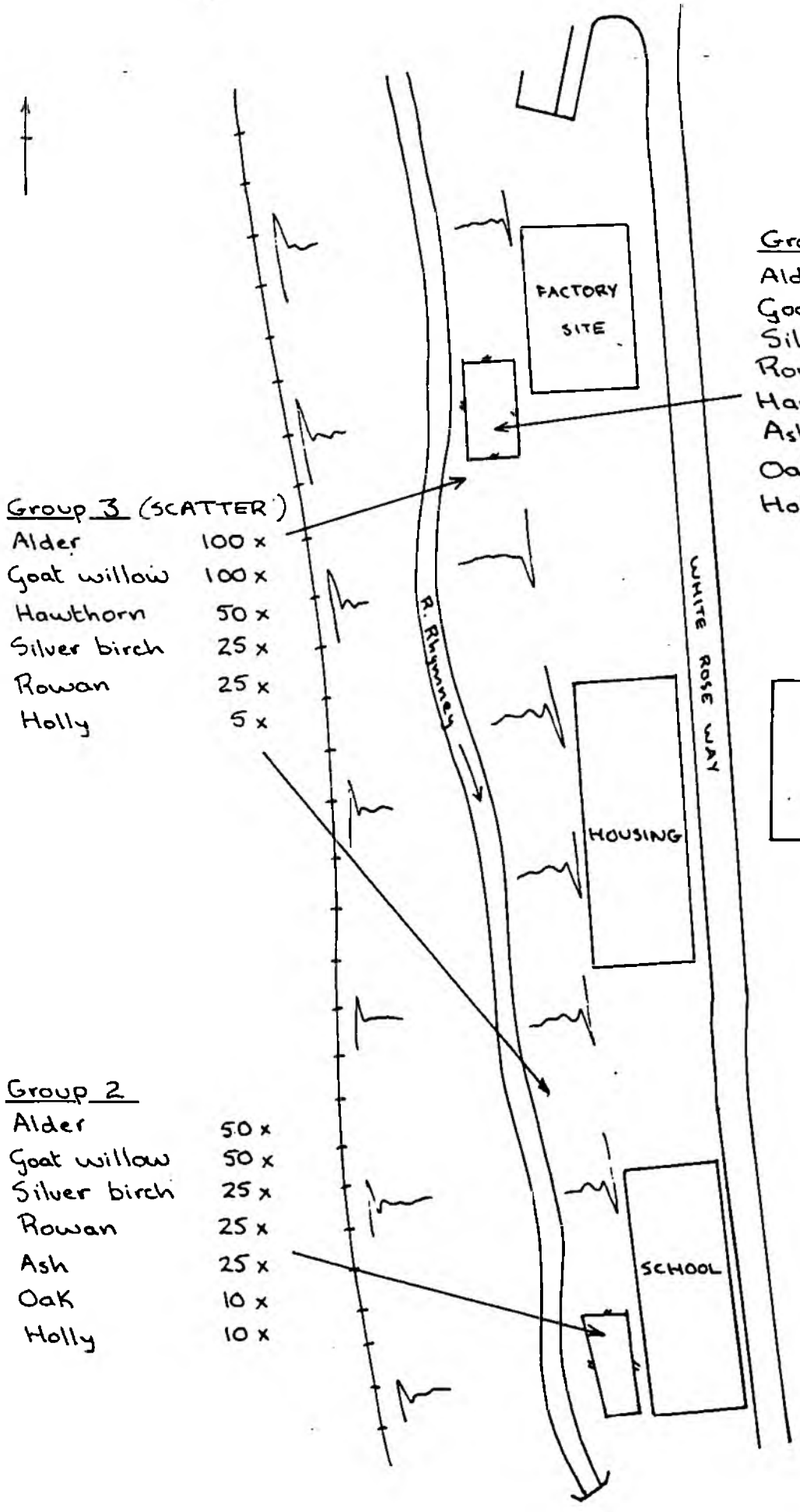
Alder	50x
Goat willow	50x
Hawthorn	50x
Rowan	15x
Oak	25x
Ash	25x

Block 3

Alder	50x
Goat willow	50x
Hawthorn	50x
Rowan	20x
Oak	20x
Ash	25x

PLANT IN GROUPS AT 1.5 - 2m CENTRES

Project D New Tredegar SO145027



Group 1

Alder	50 x
Goat willow	50 x
Silver birch	50 x
Rowan	50 x
Hawthorn	50 x
Ash	25 x
Oak	15 x
Holly	10 x

Group 3 (SCATTER)

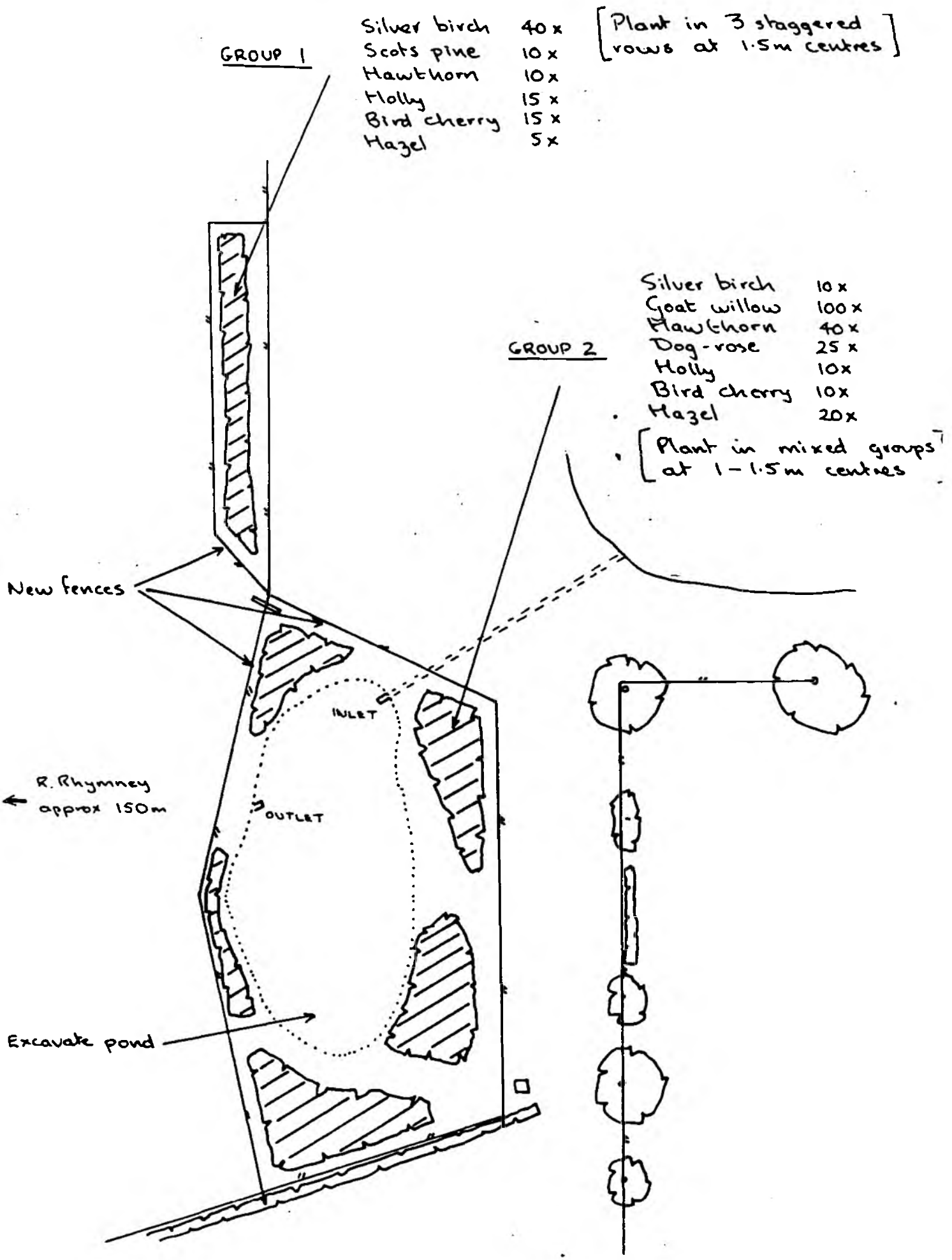
Alder	100 x
Goat willow	100 x
Hawthorn	50 x
Silver birch	25 x
Rowan	25 x
Holly	5 x

PLANT GROUPS 1 & 2 AT 2m CENTRES AS MIXTURES

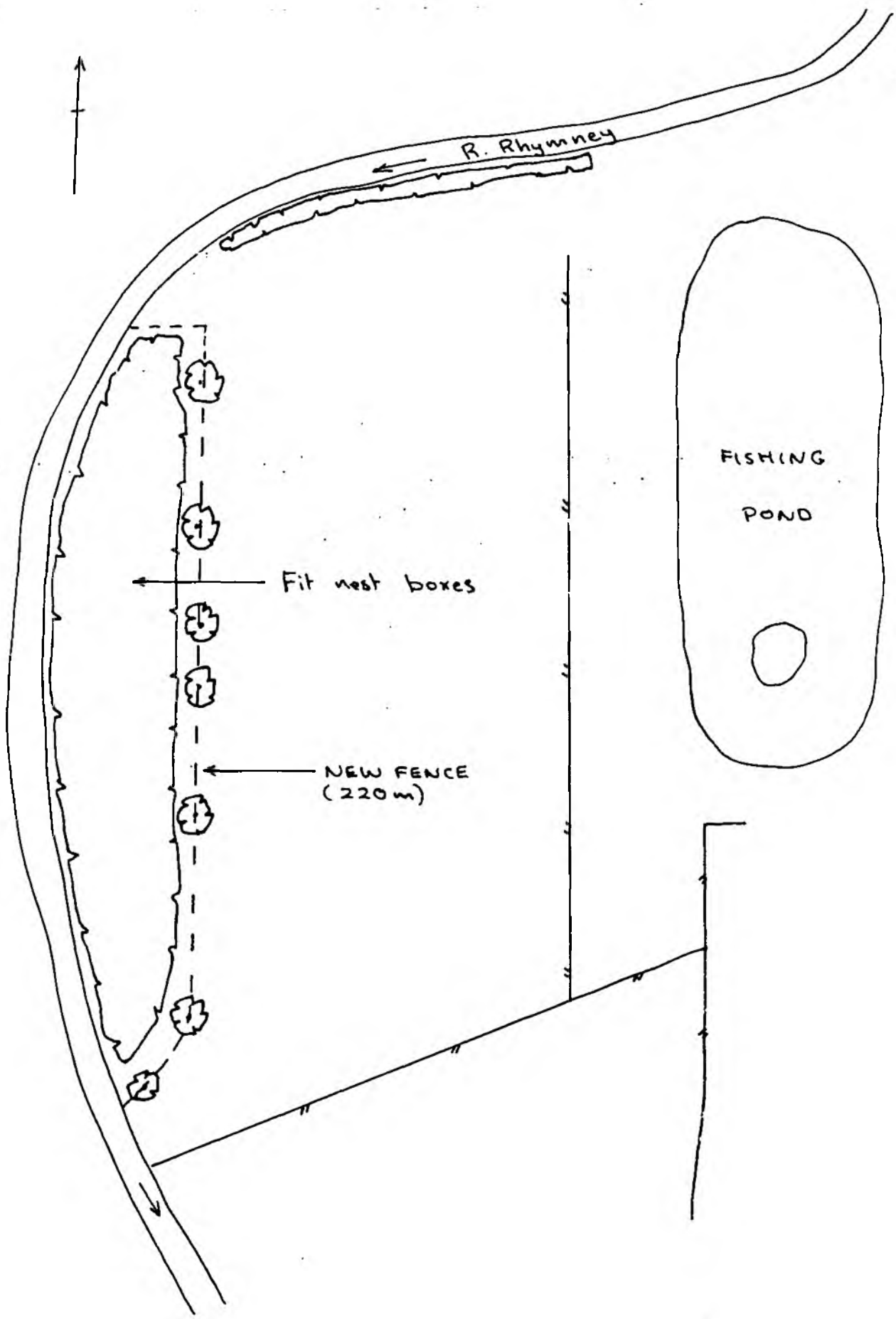
Group 2

Alder	50 x
Goat willow	50 x
Silver birch	25 x
Rowan	25 x
Ash	25 x
Oak	10 x
Holly	10 x

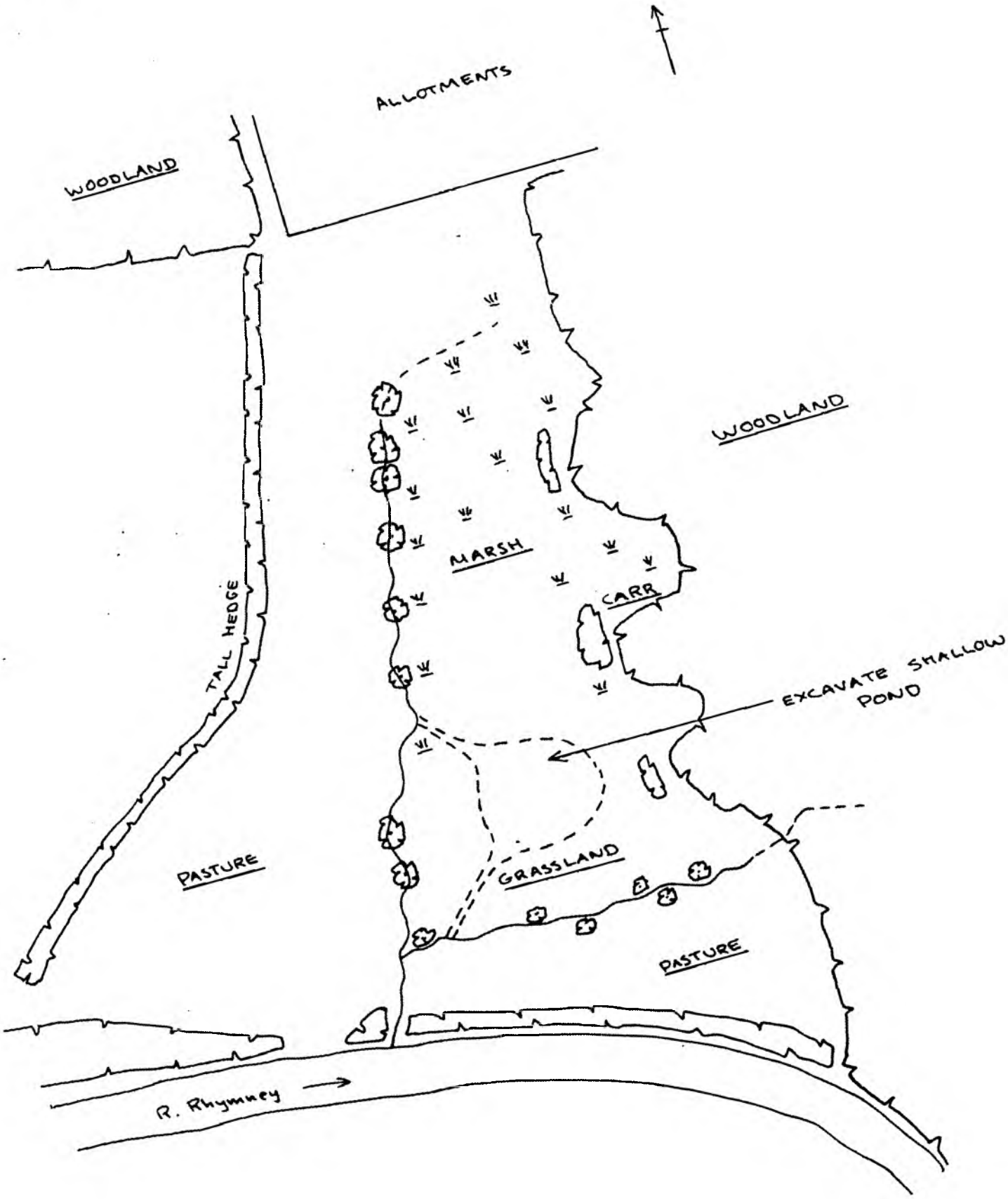
Project E Ffrwd Farm, Ystrad Mynach ST154918



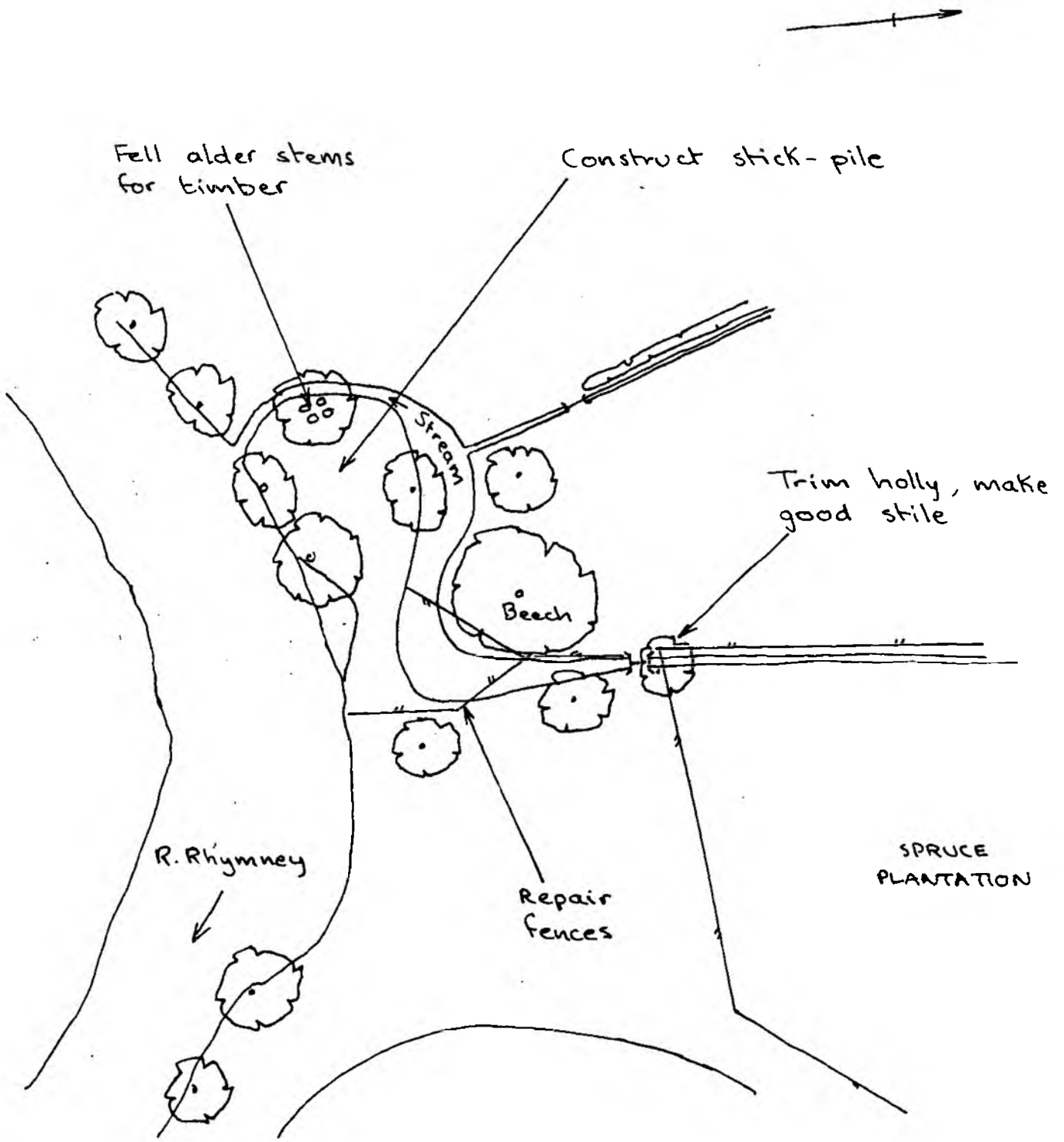
Project F Ffrwd Farm . Ystrad Mynach ST 153918



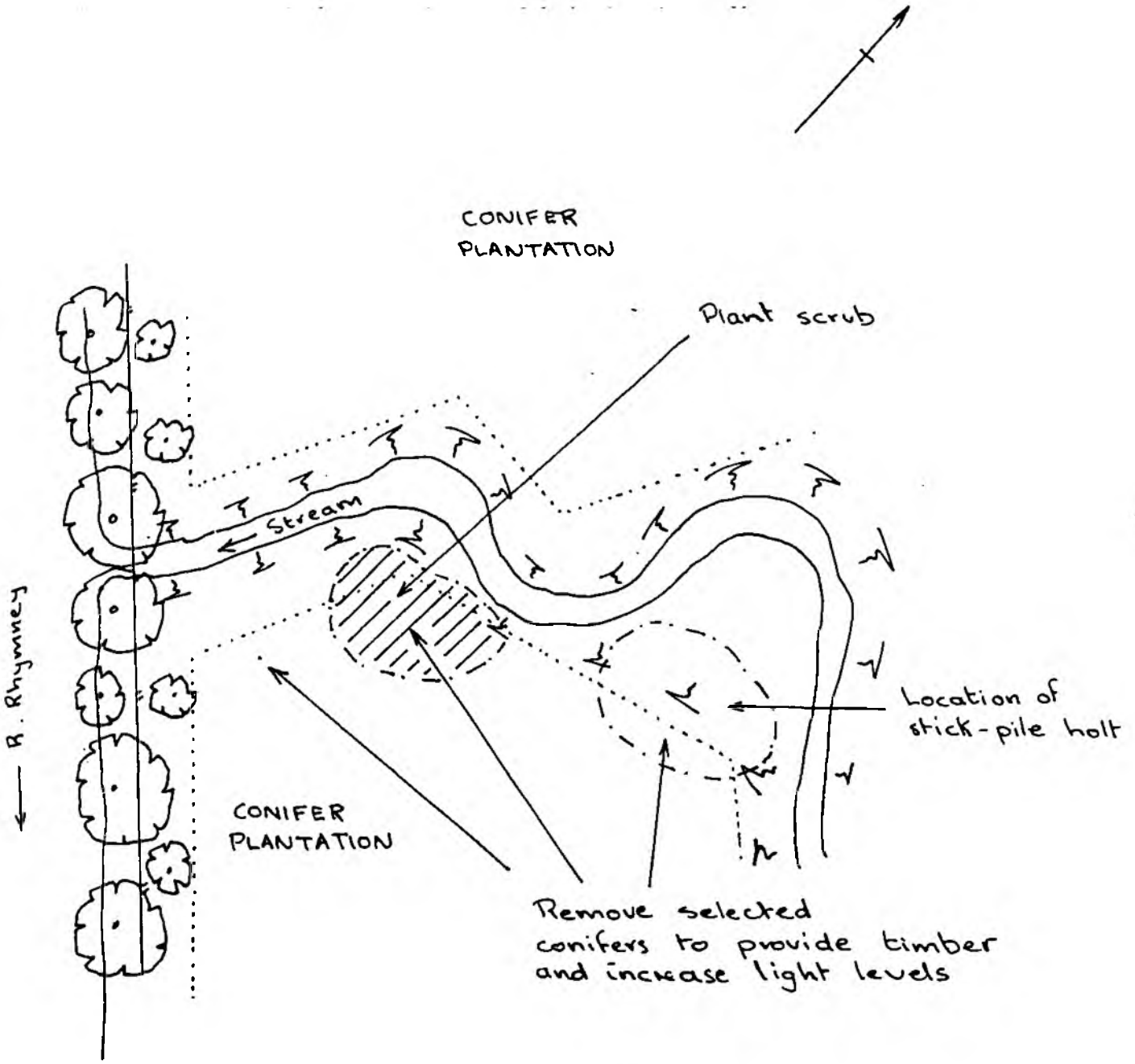
Project G Trethomas ST 187886



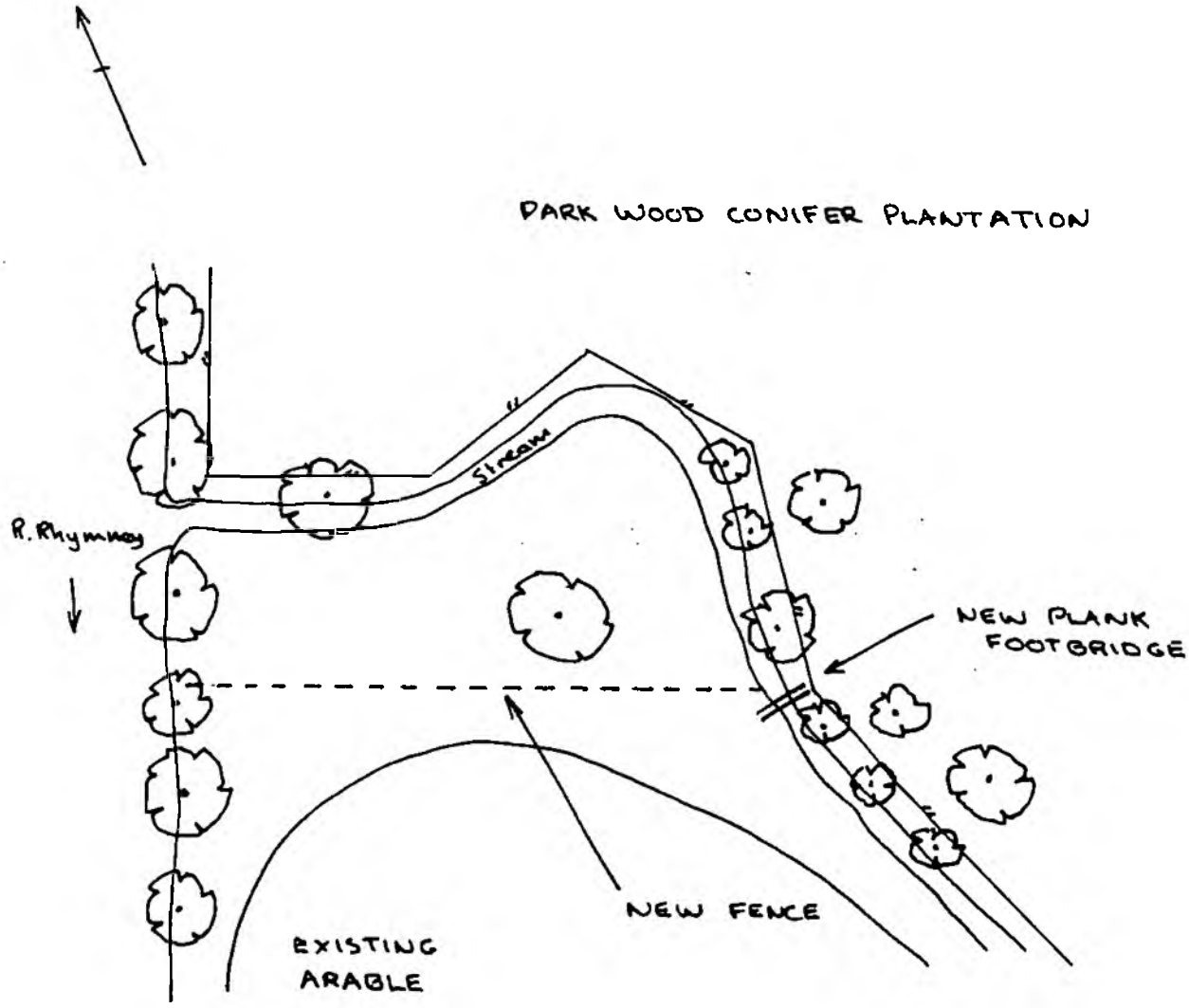
Project H Plas Machen ST238869



Project J Park Wood ST246862



Project K Bridge Farm, Michaelston ST 245861



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