

Gatehouse of Fleet
Local Championship Golf Course

Report on the Feasibility of a Local Championship Golf Course at Low Barlay, Gatehouse-of-Fleet

Prepared on behalf of

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by

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1 Terms of Reference

In August 1973, W J Cairns and Partners were appointed by Mrs E. Murray Usher to carry out a study of the feasibility of developing an 18-Hole Golf Course on one of three sites near Gatehouse-of-Fleet, Kirkcudbright, Scotland.

In response to this brief, a draft feasibility study was submitted in November 1973, in which it was recommended that Low Barlay provided the most feasible site for an 18-Hole Golf Course. A study of the financial feasibility was also included, prepared by Mr Kenneth Sutherland of Clunie and Scott, Chartered Accountants, Edinburgh.

The brief was then extended to include the design of an 18-Hole, par 72, Local Championship Course on Low Barlay. WJCP were instructed to design a unique course which was to be challenging to play for a wide range of golfing ability, visually attractive, easy to maintain and financially feasible. The course was to provide an amenity for the local population and also be a tourist attraction.

2 Golf Course Requirements

There are five general groups of requirements to be considered in the design of a golf course:

- 1 Layout Requirements
- 2 Dimensional Requirements
- 3 Visibility and Safety
- 4 Strategy for Play
- 5 Maintenance

2.1 Layout Requirements

The Royal and Ancient recommends the number of holes for a golf course, their pars and minimum and maximum lengths. A Local Championship Course requires to have a par of 72 and an overall length of at least 6,300 yards (5760 metres).

It is advantageous that the 18-Hole course is laid out in two 9-Hole rounds with the 1 tee, 9 green, 10 tee and 18 green located near the clubhouse. Each of the 9-Hole rounds should consist of two par 3's and 2 par 5's, well distributed amongst the remaining five par 4's and never consecutive. The course should start with a straight-forward par 4 and should become progressively more difficult. Throughout the course there should be a varied distribution of Par lengths and direction, and the playing of a wide variety of shots should be demanded. A good layout should require the use of every club in the bag during a round of golf.

2.2 Dimensional Requirements

Hole Lengths

The lengths of the different holes on a course should comprise 130-210 yards (120-190m) for a par 3, 350-470 yards (320-430m) for a par 4 and 480-550 yards (440-500m) for a par 5. Within these general limits, there should be one shorter and one longer par 3 and par 5 per 9-Holes and the lengths of the par 4 holes should increase over the course.

Fairways

The average width of a fairway should be 60 yards (55m), although it need not be constant, since the actual outline should be related to the strategy of play along the whole length of the hole. An average fairway should be 40 yards (36m) wide at 75-120 yards (68-110m) from the tee and should reach its maximum width of 60-70 yards (55-64m) at a distance of 180-230 yards (164-210m). On a long hole the fairway can narrow again at a length of 330-440 yards (300-400m).

Tees

The area of tees can be as great as 720 square yards (600m²), although a smaller area is adequate for long holes. Average areas are between 250-350 square yards (210-300m²) for long holes and 350-450 square yards (300-375m²) for short holes. The area should be adequate to distribute wear as well as relating to the strategy of play. The tee should be sited close to the proceeding green, a distance of between 20-30 yards (18-27m) is recommended but the requirements of the layout and site features will on occasions over-ride this requirement. Tees should normally be rectangular although not exclusively so.

Greens

Greens should be large enough to suffer fairly heavy use without too much wear and large enough to allow adequate room for cup placement but should not be so large as to require excessive maintenance. The putting area should be between 360-1080 square yards (300-900m²) depending on the strategy of play for the hole. The strategy of play should also control the general outline of the green, its internal layout and the position of any hazards.

2.3 Visibility and Safety

Visibility and safety are two inter-related requirements of golf course design. From the tee, except on a dogleg, the golfer should see the full length of the hole including each hazard, possible landing areas and the green. This not only gives the golfer a chance to plan his strategy but it also helps prevent accidents. If this is not possible, the first landing area and any fairway hazards, between 200-240 yards (182-220m), should be visible from the tee, similarly the pin and the green should be seen from the position of the last approach shot, around 100-110 yards (90-100m) back from the green. Close attention must be given to all aspects of safety on the course. The distance separating fairways, especially parallel ones should be at least 30 yards (30m) if there are no trees and 20 yards (20m) if there is a thick band of trees, however, the formation of avenues of trees down each hole should be avoided. Similar distances should be allowed between fairways and greens and areas designated out-of-bounds, especially public roads. Particular attention should be given to the right side of holes due to the tendency of many players to slice. The direction of play should also be considered in relation to the position of the sun, thus for comfort and safety east-west holes should be avoided especially for the final holes.

2.4 Strategy for Play

A good golf course should cater for a wide range of golfing ability, from the local championship player, to the regular club player, to the man with the high handicap who only plays a round of golf on holiday. This can be achieved by rejecting the penal design concept favoured by some of the traditional courses and replacing it by the strategic concept. In the former type of course poor shots are penalized, for example, by the placing of sand bunkers at about 130 yds (120m) from the tea just where a short drive would land. The strategic approach makes the course more interesting for the low handicap player while not discouraging the less skilled. For example, alternative routes are provided between the tea and green which require the golfer to make careful decisions, safer but longer routes are provided for those not capable of distance or accuracy and hazards are placed so that they seldom come into play with short hitters but demand greater accuracy from long hitters. Generally, the strategic concept relates the width of the fairways and the size of the greens to the length and difficulty of the hole.

2.5 Maintenance

The design of a golf course can strongly influence both the subsequent maintenance requirements and the ease with which it can be carried out.

Careful design can reduce maintenance requirements and make them simple operations which can be done by machine. For example, the size of tees and greens should be adjusted according to maintenance conditions and the slopes of elevated tees and bunkers should enable them to be cut by machine. Raised, freely draining greens and tess should be constructed and an artificial irrigation system should be installed for use in dry periods. Fairway grasses should be chosen an excellent sward and also be faitly slow growing to reduce the need for essential grass cutting. Where appropriate remaining areas of the site should be planted with trees and shrubs, which present a larger initial capital outlay than grass but require little subsequent maintenance.

3 Site Opportunities and Constraints

Each golf course site has a unique combination of site features which represent opportunities or constraints to the layout of the course.

3.1 The Site

The Low Barlay site covers an area of 58 hectares (144 acres) along the lower section of the Vale of Fleet, north of Gatehouse-of-Fleet. It lies between the Water of Fleet on the west and the Laurieston and Carstramond Roads on the east, with the north and south boundaries at Stoquahain's Pool and Standing Stone Pool respectively (Figure 1). At present, the site forms a single farming unity on the Cally Estate, used mainly for cattle grazing with some hay and fodder cropping and small scale estate forestry.

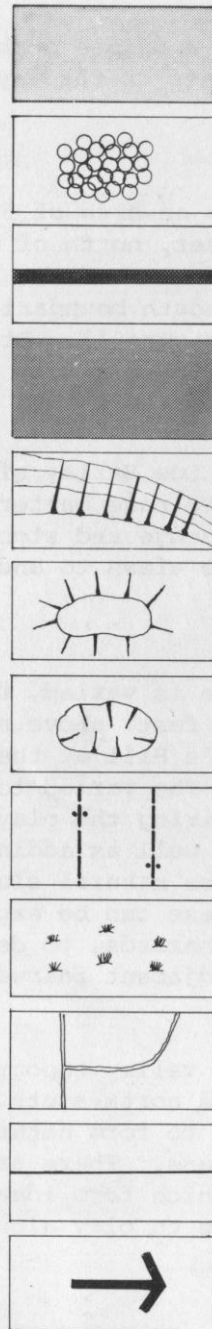
The major features of the Low Barlay site have been identified as: the varied topography, the natural drainage pattern and surface water bodies, the existing vegetation patterns, the hedge and stone dyke field boundaries, the electricity transmission lines and the views to and from the site.

3.2 Topography

The topography of the site is varied, ranging from flat flood plain adjacent to the river at 5 metres (15 feet) above sea-level through gently undulating land, to the steep-sided Harper's Hill at the south of the site with a maximum height of 44 metres (140 feet). The varied topography can be used to advantage in the course layout by requiring the playing of different types of shot and the use of different clubs as well as adding to its visual character. There are areas of the site where the natural slopes are too steep to be incorporated into active playing areas. These can be exploited by incorporating them into the course to act as natural hazards, to define the edges of fairways, to provide safety barriers between adjacent fairways and finally to add to the visual character of the course.

Superimposed on the basic valley topography are several sandy knolls with elongated forms orientated north-south down the valley. These knolls can be used in the course layout to form natural barriers between fairways and natural settings for tees and greens. There are several small isolated hillocks and depressions on the site which form ideal sites for tees and greens or which can be used as natural hazards to play along fairways.

Figure 1 Site Features



Flood Plain

Existing Trees

Road

Water Bodies

Steep Bank

Mound

Depression

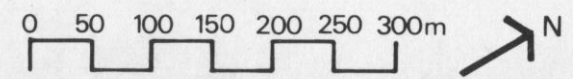
Overhead Power Lines

Marsh

Hedges

Walls

Views





3.3 Drainage and Surface Water Bodies

The existing water drainage pattern over the site both constrains and provides opportunities in the layout of the course. Surface water run-off from the site drains into the Water of Fleet, along the western boundary of the site, and its tributary Barlay Burn, which bisects the site east-west. The Fleet experiences frequent heavy flows when it breaks over its banks and floods the adjacent low lying land, therefore, no important elements of the golf course should be laid-out in this area (Figure 1). There are several other areas on the site which should be avoided in the layout because of poor drainage. Barlay Burn is 2-3 metres (6-9 feet) wide, shallow and not liable to flooding, these characteristics and its path across the centre of the site make it an excellent natural hazard.

In the northern part of the site, in the depression adjacent to Low Barlay Farm, there is a disused curling pond which drains westward through a small ditch into the Water of Fleet. This pond can form a challenging hazard which will be a memorable feature of the course. A badly drained hollow, where water tends to lie at the surface, forms an unusual water feature of almost an acre in the north-west of the site. This can be incorporated into the scheme, exploiting its potential as a natural hazard. All the surface water bodies provide eye-catching features on the site, although they have been neglected in recent years.

3.4 Vegetation

There are several types of distinctive vegetation within the Low Barlay site which help accentuate the variable character of the site. Along the banks of the Fleet, Barlay Burn and the open ditches there is a characteristic plant community of alder and willow trees with associated shrub and herb layers. In the large badly drained hollow, there is a dense cover of willow, alder and hawthorn up to 8 metres (25 feet) high. All the badly drained areas of the site display a typical marsh herb layer.

On the steep open slopes, where no recent land improvement or other cultivation has taken place, there is usually a considerable growth of gorse, brambles, bracken, wild rose, barberry and shrub hawthorn. It forms a natural rough which can be easily incorporated into the golf course. The existing grassland is generally capable of improvement to form fairways but it is not of good enough quality for tees and greens.

The sandy knolls are easily recognised by their covering of fine mature trees, mainly oaks. The site is also characterised by isolated groups of mature trees which give a parkland appearance to several areas of the site. Mature hardwood trees cover the steep slopes adjacent to the Fleet. Most of these existing trees can be incorporated into the golf course to aid the placing of shots

especially if sited behind greens, to increase safety on the course, to act as natural hazards, as well as making it visually attractive and helping to integrate the golf course into the surrounding landscape. Finally the existence of mature vegetation can give the new golf course an established appearance while also providing existing patterns of trees which can be reinforced by new planting, for example, along steep slopes and in depressions.

3.5 Field Boundaries

The characteristic field boundaries on Low Barlay are mature hedgerows, stone dykes, including several constructed during dyke-building competitions, and post and wire fences. The retention of certain hedges and dykes, which are existing features of the landscape, can help to blend the golf course into the surrounding agricultural landscape and can act as hazards and boundaries as well as providing interest.

3.6. Electricity Transmission Lines

There are two sets of electricity transmission lines running across the site. A local low voltage supply line runs from Low Barlay Farm, across the northeast corner of the site. This can be re-routed to run along the site boundary at an acceptable cost. The problem of the two 33 kv powerlines with their five metal pylons, which cross the southern section of the site from Harper's Hill in an east-west direction, cannot be solved so easily. Re-routing these or putting them underground is out of the question, due to the prohibitive cost of either operation. Siting greens and tees beneath the lines where they will be visually unobtrusive and high aerial shots are few, or by placing low planting around the pylon bases can reduce the physical and visual impact of the powerlines.

3.7 Views

Views can be divided into three groups, views within the site, views beyond the site and views into the site. Within the site, the best views over the course can be seen from the top of Harper's Hill and from near Fleuchlarg. These view-points can be exploited by placing tees and the clubhouse at these positions since there will be time to enjoy the views. There are also several other interesting views within the site, mostly framed by trees, which can be incorporated in the course layout (Figure 1).

As a consequence of Low Barlay's position at the bottom of the Vale of Fleet, the views from the golf course to the hills of Galloway on the horizon will be a pleasing feature. Alignment from tees or along fairways to the green to features on the surrounding skyline, for example towards the Rutherford Monument and Carstramond Hill, can add to the interest of the game. Views tend to be

channelled up and down the valley but shorter views can be opened up across the Vale of Fleet towards the uplands. The views beyond the site provide one of the outstanding characteristics of the site. There are a few important views onto the site that must be considered, particularly those seen from the approach road to the Fleuchlarg and other nearby roads. From some positions on the hillsides of Vale of Fleet it is possible to see almost the whole site. Good views onto the site should be maintained wherever possible and improved by providing foreground framing and focusing views on points of interest on the course.

4 The Proposed Golf Course

4.1 Design Strategy

The strategy adopted in the design of the golf course on Low Barlay has been to take the requirements outlined in Chapter 2 and to design a layout which makes maximum use of the existing features of the site, as identified in Chapter 3. Thus, a golf course layout has been designed based on the strategic concept of play which will be challenging for a wide variety of golfing ability. By incorporating many existing site features to maximum advantage, the course will merge into the surrounding landscape and for the standard which can be achieved, will be inexpensive to construct.

4.2 Proposed Layout

The proposed golf course layout on Low Barlay has a par of 72 and is to Local Championship standard with a total length of 6,494 yards (5938m) (Figure 2). The course is laid out in two 9-Hole circuits, the 1 tee, 9 green, 10 tee and 18 green all being sited adjacent to the proposed clubhouse at Fleuchlarg. The course begins with an easy par 4 and it becomes progressively more difficult, with the second 9-Holes being more difficult than the first 9. The various lengths of holes and pars are well mixed throughout the course (Table 1). The layout includes 4 doglegs.

It has been possible to achieve a wide variety of stroke/shot due to the varied topography of the site. The flattest holes lie alongside the Water of Fleet and either side of Barlay Burn, for example the 6,9,10 and 14 holes. The gradient along the 4,7, and 13 fairways gradually changes along their full length while along the 5,8,11,12 and 15 the breaks of slope are more abrupt. The 4,5 and 14 tees are sited on small hillocks as are the 2,15 and 16 greens which makes the drive and the final shot to the green more difficult. Between the 8, 11,16 and 17 fairways steep banks provide a physical safety barrier. Elsewhere depressions have been used as natural hazards, as alongside the 4,5 and 8 fairways, along the 5 and 8 fairways the hazard is positioned between the angle of the dogleg. Little modification of natural contours is needed except to form or complete the construction of new greens, tees and areas of fairway.

The flood plain adjacent to the Water of Fleet has been avoided as much as possible to reduce the likelihood of flooding affecting the course. The central section of the 14 fairway may require to be raised slightly and additional drainage constructed. Along the 8,11 and 17 fairways the laying of a tile drainage system will be necessary. Elsewhere on the site the drainage can be improved by cleaning out the existing agricultural drains.

Table 1 The Length And Par Of Holes

Hole	yds	m	Straight or dogleg	Par
1	344	315	S	4
2	442	404	S	4
3	131	120	S	3
4	383	350	S	4
5	486	444	D	5
6	186	170	S	3
7	394	360	D	4
8	493	451	D	5
9	366	335	S	4
Total	3225	2949		36
10	408	373	S	4
11	358	327	S	4
12	132	121	S	3
13	505	462	S	5
14	418	382	S	4
15	198	181	S	3
16	370	338	D	4
17	481	440	S	5
18	399	365	S	4
Total	3269	2989		36
GRAND TOTAL	6494 yds	5938 m		Par 72

It has been possible to layout the course so as to take maximum advantage of Barlay Burn: fairways cross the Burn four times and the 14 green is situated in front of it and the 18 green is behind it. Along the 10 and 18 fairways the position at which the fairway crosses the Burn is strategically placed so as to demand distance and accuracy from the low handicap player. Similarly the curling pond has been redesigned to create a greater challenge for the long hitter along the 17 hole.

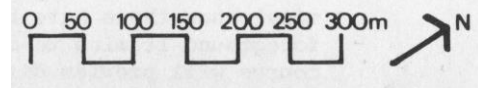
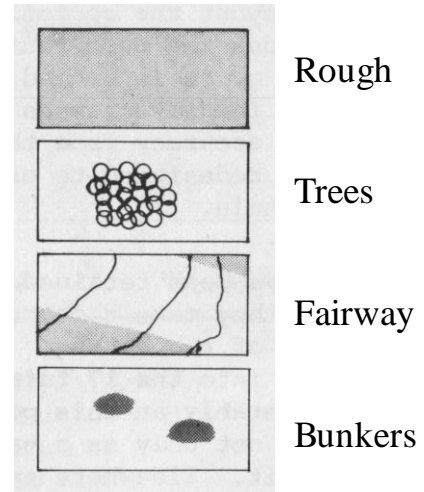
Existing mature trees have been retained wherever possible and incorporated into the course so that they make a contribution to the game as well as improving the appearance of the course. For example, the clump of trees on the sandy knoll projects into the 17 fairway in front of the green causing the fairway to narrow considerably at this point. The steep tree covered bank behind the 10 green acts not only as a hazard but also adds to the appearance of the green by framing it. Elsewhere existing tree belts have been used to aid safety on the course, for example, between the 15 fairway and 11 tee and between the 18 fairway and Carstramond Road. The form of the existing tree planting on the site has been continued in the proposed tree planting along the steep bank adjacent to the 6 fairway, in the depressions adjacent to the 5 and 16 and on the knoll beside the 17 tee. This planting will improve the appearance of the site and will help it to merge into the surrounding landscape. This will be further achieved by keeping some areas of existing natural rough, especially alongside Barlay Burn and on Harper's Hill. All established vegetation on the site will help to give the new course a mature character. Over much of the site the existing pastureland is capable of improvement to form fairways, however, greens and tees will need to be specially constructed.

Wherever possible existing walls and hedges have been kept to merge the golf course into the surrounding landscape. They will also provide points of interest on the course and the hedges alongside the boundary of the 6 and 17 fairways have been incorporated into the course as a hazard.

It is proposed to reroute the local electricity transmission line along Carstramond Road but the position of the high voltage lines has been accepted because of the cost of re-routing. However, the course has been laid out so as to minimise the affect of these by playing under the lines where they are highest above ground level, for example, below Harper's Hill, and by running fairways parallel and between the two rows of lines. The more obtrusive pylons by the 7 and 13 fairways will be partially hidden by planting small trees and shrubs around their bases.

Maximum advantage has been taken of the excellent views within the site and in many cases these have been improved by opening up new views and by providing foreground framing to others. The varied directions of play through the course will provide different views from the course. The best views will be

Figure2 Golf Course Layout





from the highest points of the course, the 2 tee, the 15 green and 17 tee and from the clubhouse. Landmarks on the surrounding hills will be useful additional aids to play. There are interesting views across the course from both Carstramond Road and Laurieston Road.

4.3 Hole by Hole Description of the Recommended Layout

Hole No. 1 Length 344 yards (315 metres) Par 4

This is a straight-forward, short par 4 to start the course with no hazards to hold up play. There is a long rectangular tee which breaks through an existing stone wall. The drive from the tee is an almost level shot running gradually away from Carstramond Road. A tree block lies on the east side of the fairway, at 140 yards (30m), which will protect the road from hooked shots and will focus the first drive towards the hole. The approach shot is diagonally up Harper's Hill, to a large elevated green cut into the hillside.

Hole No. 2 Length 442 yards (404 metres) Par 4

The tee is sited on top of Harper's Hill and has panoramic views across the course. The drive from the tee is downhill and a long shot will be an advantage since the ball will land on top of a small ridge insuring that the approach shot to the green will not be played blind. There is an area of trees and shrubs marking the west side of the ridge. The oval shaped green lies on top of a small rounded hillock framed behind by a belt of trees.

Hole No. 3 Length 131 yards (120 metres) Par 3

This is the shortest par 3 on the course and requires a short, accurate uphill iron. The shot from the tee is up through a narrow gap in the trees to a small green perched on top of a narrow spur. Trees planted in the depression behind the green provide a backcloth.

Hole No. 4 Length 383 yards (360 metres) Par 4

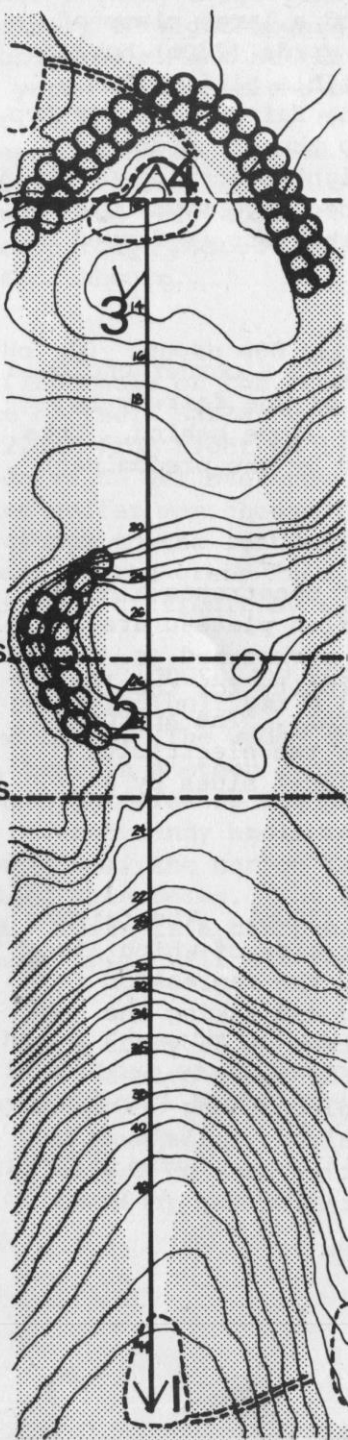
This is a fairly easy hole, the only difficulties are hazards at both sides of the fairway and a narrow entrance to a right green. The tee is elevated above the fairway, being sited on the end of a spur. Up to 300 yards (275m) from the tee, the fairway slopes gently southward, towards a large tree and water filled depression which lies on the right edge of the fairway. A long, straight drive is required from the tee. The fairway narrows to the left at 175 yards (160m) where there is a clump of trees and it continues to narrow to less than 45 yards (40m) in front of the green. The green is wedge shaped with Harper's Hill rising from its left side and out-of-bounds, marked by a stone wall, a few metres behind it.

Hole No 2 Par 4

442yds

280yds

225yds



Plan

442

400

350

300

250

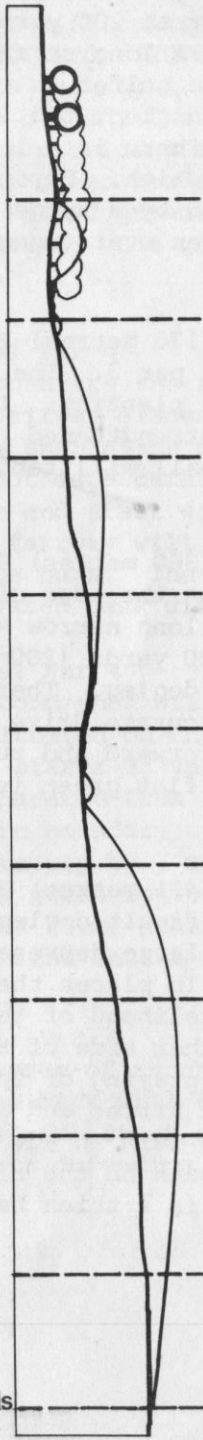
200

150

100

50

0yds



Section

4



3



2



1



Hole No. 5 Length 486 yards (444 metres) Dogleg Par 5

The fairway doglegs to the right at 200 yards (200m) around a large clump of trees planted in a depression. A long straight drive 250 yards (230m) hugging the right hand side will put the golfer in range of a possible birdie with a downhill iron shot. After the dogleg, the left edge of the fairway lies on top of a steep tree covered bank. There is a long approach to the green down a gentle slope 8 metres (25 feet) high. Beyond this, the right hand side of the fairway is out-of-bounds, marked by a hedge and trees. The large round green has a bunker behind it to trap an overstrong shot and on the left is framed by trees.

Hole No. 6 Length 186 yards (170 metres) Par 3

This is a straightforward, long par 3. The tee is located in a corner enclosed on two sides by hedges and tree planting. The right side of the fairway is bounded by an existing hedge, strengthened by trees on the slope behind. This is the direction to which the ball will tend to be carried by the predominant south-westerly wind.

Hole No. 7 Length 394 yards (360 metres) Dogleg Par 4

The long rectangular tee lies on the edge of a bank and it penetrates a hedge. The drive from the tee is up a long narrow valley onto a flat plateau area. The dogleg is to the left at 220 yards (200m) with trees, shrubs and an electricity pylon sited in the dogleg. There is an opportunity for the low handicap golfer with a long, accurate drive to cut the corner. The approach shot to the green is straight forward and runs between the two electricity transmission lines. The large flat green is enclosed on three sides by a horseshoe of tree planting.

Hole No. 8 Length 493 yards (451 metres) Dogleg Par 5

This is a long par 5 with a difficult dogleg at 220 yards (200m). The fairway falls away to the right into a large depression, the other side of which lies on the edge of the 4 fairway. In places the slope down to the depression is quite steep, increasing the likelihood of the ball rolling and making the next shot more difficult. On the other side of the narrow fairway at 55 yards (50m) is a thick belt of trees. The playing of the drive from the tee requires accuracy from all but the short hitter and an accurately placed long drive, cutting across the dogleg, will gain an advantage. The fairway falls away between a steep, tree covered bank on the right and a gentler bank on the left, to a small level green. There is a thick belt of trees framing the green and protecting the 9 tee behind it.

Hole No. 9 Length 366 yards (353 metres) Par 4

A seemingly straightforward short hole but difficulties exist in the target area for long drivers and at the green. At 220 yards (200m) the fairway narrows to 45 yards (40m) where a belt of trees to the right impinges onto the fairway requiring the long drive to be accurately placed. There are also two clumps of trees on the other side of the fairway, providing a barrier between the 9 and 10 fairways. The approach shot to the green needs to be short to medium in length and very accurate to reach the raised green. There are two bunkers and dense rough placed tight behind the green. The green is located adjacent to the Clubhouse.

Hole No. 10 Length 408 yards (373 metres) Par 4

This first hole of the second circuit encounters the first of the water hazards on the course. Barlay Burn crosses the fairway diagonally at 165-240 yards (150-220m) from right to left. This will enable the golfer with a medium to long drive to get over the burn if the shot is accurately placed. The less skilled golfer may choose the safer route and start with a short drive. The tree clumps to the left and right of the fairway will help focus the shot. The approach to the green runs parallel to the burn. The green is relatively small and is made difficult by a steep tree covered bank directly behind it.

Hole No. 11 Length 358 yards (327 metres) Par 4

This is a difficult par 4 because the second shot will almost invariably be played blind. The wedge shaped tee is situated on the north side of Barlay Burn, beneath a steep bank. The fairway starts 33 yards (30m) from the tee, on the other side of the Burn, and is separated from it by marshy rough. A tree covered sandy knoll marks the western boundary of the fairway. At 185 yards (170m), the narrow fairway rises steeply by 7 metres (22 feet) between parallel tree belts. The large elongated green is located on an existing mound. There is a clump of trees 55 yards (50m) behind the green in line with the hole which will aid the sighting of blind shots.

Hole No. 12 Length 132 yards (121 metres) Par 3

This is a short par 3 demanding a high degree of accuracy. The tee is elevated on the side of a bank. The drive down the bank will fall some 10 metres (30 feet) onto a small fairway which is framed on either side by trees. There is a small flat target green, with two bunkers defending the left flank and a belt of trees at the rear.

Hole No. 13 Length 506 yards (462 metres) Par 5

This is the longest hole on the course. The tee is sited at the bottom of a sandy knoll. There is a small stream crossing the fairway diagonally at 220-240 yards (200-220m) which will require medium length drives to be accurate. A belt of trees on the west side of the fairway will protect the adjacent 14 fairway from sliced shots. The second shot will be across the side of a small hill, made more difficult due to the narrowing of the fairway at the target area with clumps of trees restricting either side of the fairway. The ground falls gently away from this area to the left and towards the green. The green is medium sized, with a bunker guarding the left side and a tree belt behind it.

Hole No. 14 Length 418 yards (382 metres) Par 4

An almost square tee is sited on top of the west side of the hill. The downhill drive is across the slope, towards the stream which crosses the fairway at 185-200 yards (170-180m). This will create problems for the short to medium hitter. Over the far side of the stream, in the target area for a long drive, the fairway is only 40-45 yards (35-40m) wide being bounded on the right by a tree belt and on the left by marshy rough. The green is small and Barlay Burn is located directly behind and adjacent to it, which will penalize long shots.

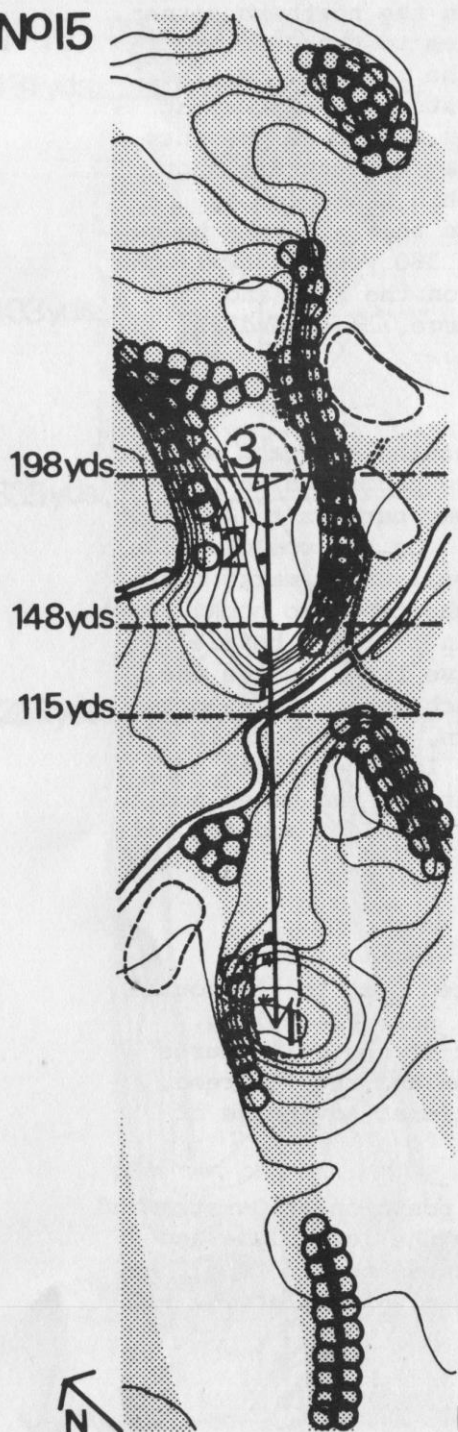
Hole No. 15 Length 198 yards (181 metres) Par 3

This is the longest par 3 hole on the course. The tee is sited on top of a sandy knoll. From the tee, a long accurate drive is needed to cross Barlay Burn to an elevated green, sitting on the crest of a spur. The land falls away steeply from either side of the green and 45 yards (40m) in front of it, where the land falls steeply down to the burn. The right slope from the green is covered by mature trees presenting problems for the golfer who tends to slice but the left one is more open. Trees lie behind the green which is quite small.

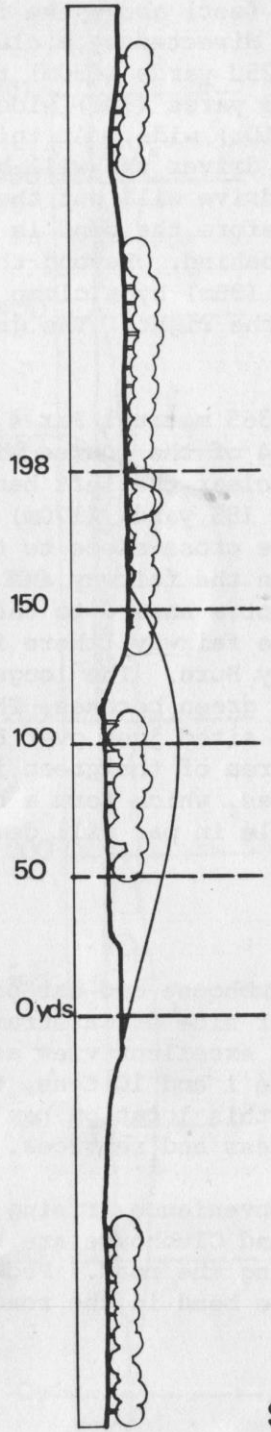
Hole No. 16 Length 370 yards (338 metres) Dogleg Par 4

This is one of the two most difficult par 4's on the course. It requires a controlled medium to long drive from the tee, passing close to a tree clump on the left, to a target area on the top of a ridge. The land falls away at either side of this, with a bank on the right being covered with trees. The approach shot to the green is focused by the topography and must be accurate to avoid penalty. The green is large and elevated, with the land falling away on all sides, and is situated on the far-side of a deep narrow ravine. This makes the approach more difficult by demanding a shot with no roll to be played.

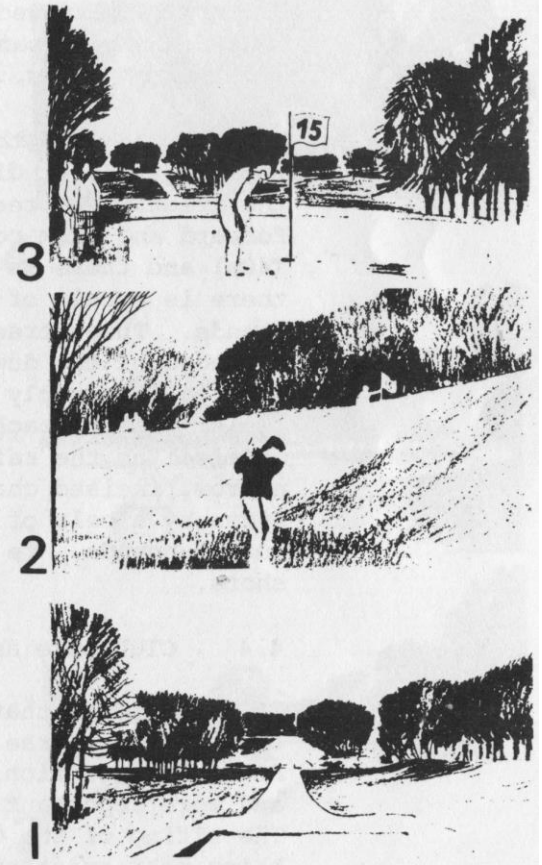
Hole No 15
Par 3



Plan



Section



Hole No. 17 Length 381 yards (340 metres) Par 5

The tee is located 8 metres (25 feet) above the fairway, in the northern corner of the site. The drive shot is directed by a clump of trees to the left and a steep bank on the right. At 250 yards (230m) there is the reshaped curling pond, 75 yards (70m) long and 33 yards (30m) wide, with a strip of fairway at either side at least 10 yards (10m) wide. At this location, the pond presents the greatest hazard to the long driver who will have to play an accurate shot to the left hand-side. A long drive will put the hole within range for a possible birdie. The fairway before the pond is bounded on the left by a hedge and a steep out-of-bounds bank behind. Beyond the pond at 380 yards (350m), the fairway is narrowed to 38 yards (35m) by a clump of trees on the left and further on by a sandy knoll on the right. The green is large, level and is enclosed by trees.

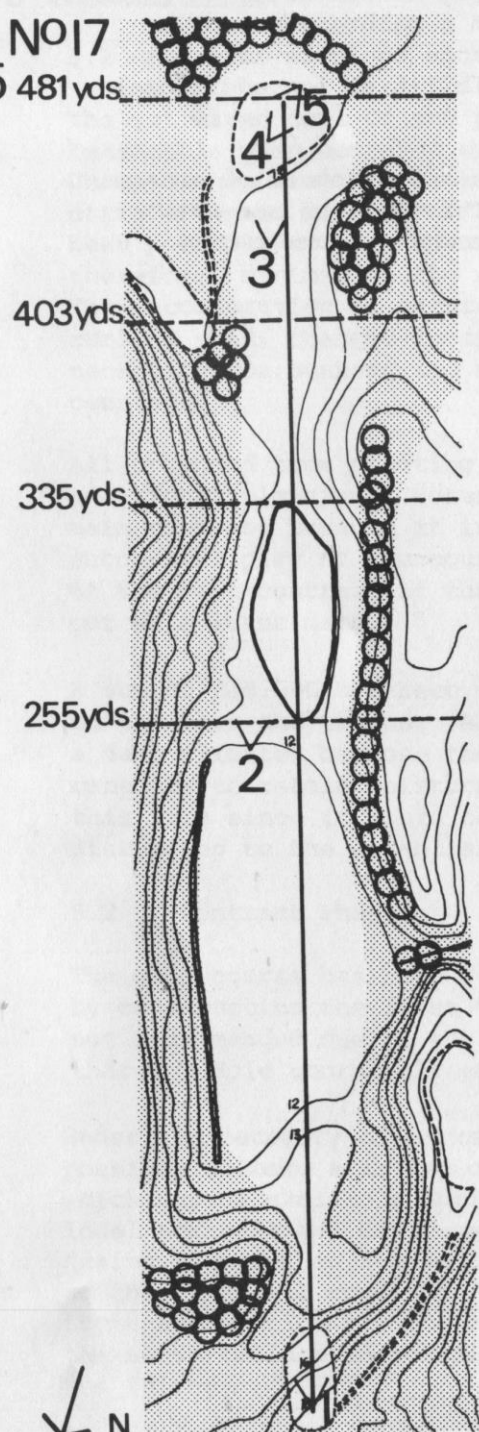
Hole No. 18 Length 399 yards (365 metres) Par 4

This is the most difficult par 4 of the course with an exacting approach shot to the green. The tee is long to clear the left hand boundary hedge and to provide forward and back positions. At 185 yards (170m) the fairway narrows to 45 yards (40m) and there is a long gentle cross-slope to the south. On the upslope side there is a belt of trees between the fairway and a stone wall which marks out-of bounds. These trees will present a hazard to the golfer who tends to hook. Past the edge of the downslope of the fairway, there is a margin of rough before the land falls steeply way to Barlay Burn. The longer the drive from the tee the easier the approach shot to the green becomes. This approach shot is even more critical as the raised green is sited just over Barlay Burn, which flows in a narrow, incised channel. The area of the green is small. It is enclosed on 3 sides by a belt of existing trees, which form a barrier between the green and out-of-bounds. To play this hole in par will demand long, straight and accurate shots.

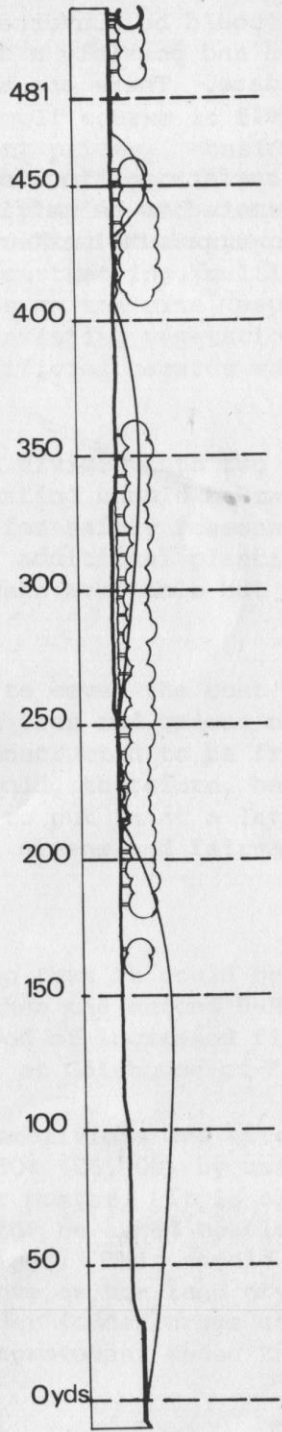
4.4 Clubhouse and Car Park

It is proposed that the golf Clubhouse and car park be sited just to the southeast of the course, on the other side of Carstramond Road, near Fleuchlarg. From this position, there is an excellent view across most of the golf course and more important, views of the 1 and 10 tees, the 9 green and the 18 green. The siting of the Clubhouse at this location has the additional advantage of being near existing vehicle access and services. The question of safety and inconvenience arising from the position of Carstramond Road lying between the course and Clubhouse are reduced by the low volume and local nature of the traffic using the road. Pedestrian access to and from the course can be kept away from the bend in the road in front of Fleuchlarg.

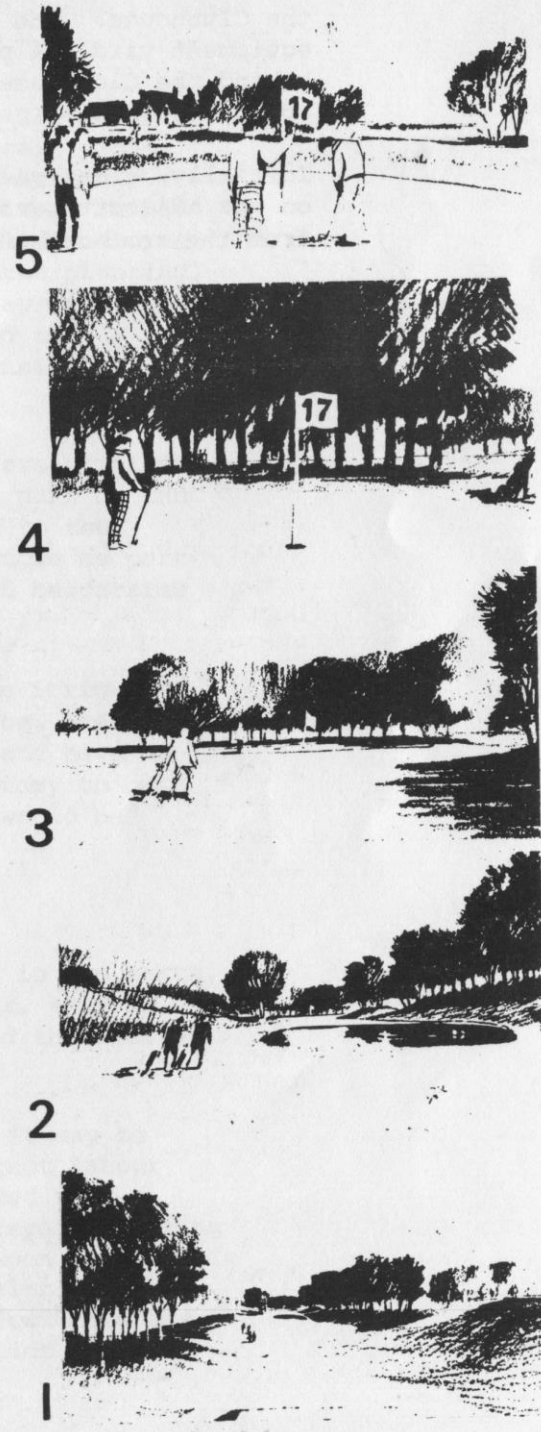
Hole N°17
Par 5 481yds



Plan



Section



It is recommended that the traditional stone-built Fleuchlurg is converted to form the Clubhouse. The outbuildings could be converted to form a maintenance equipment yard. A practice green and possibly a driving range could be laid out behind the Clubhouse at a later date. There are also possibilities for additional sports facilities, such as tennis.

Initially, a car park with hard surface parking for 50 cars and an overflow area on the adjacent grassland is estimated to be sufficient. This will be screened from the road and will receive appropriate hard and soft landscape treatment.

5. Implementation

5.1 Costs

The estimated cost of the proposed golf course is £180,000 (Table 2). This is reasonable when compared with current prices, considering its Local Championship length, the high standard of specification and the inherent attractiveness of the course from a playing and visual point of view. It has been possible to keep costs low by taking advantage of existing site features, therefore, minimising the need for earthmoving, cultivation and tree planting. The incorporation of natural hazards on the site, especially Barlay Burn, the curling pond, changes in slope and existing vegetation has reduced the necessity for bunkers and other artificial hazards which are expensive to construct.

All proposed tree planting has been divided into two categories, essential and additional planting. Essential planting should be carried out as part of the main contract because it is needed for safety reasons or is vital to the successful play of the course. All additional planting could be done as part of the main contract if the funds were available but if not, could be carried out at a later date.

A sum of £14,500 has been included to cover the cost of installing irrigation to the tees and greens. All modern tees and greens need irrigation, even in a damp climate, because they are constructed to be free-draining and have no capacity to retain moisture. It would, therefore, be a false economy to omit this item since it would cost more to put in at a later date and would be disrupting to the established tees, greens and fairways.

5.2 Contract Phasing

The golf course has been designed so that it could be implemented in two parts, by constructing the first 9-Holes then the second 9-Holes, however, this is not recommended due to the likelihood of increased final costs and the fact that a 9-Hole course already exists at Gatehouse-of-Fleet.

Under the category of works, site demolitions and site clearance, it may be possible to make a saving of up to 50% (£6,000) by using local direct labour which may be available during winter months. It is also recommended that a local agricultural drainage contractor be asked to clean out and repair existing drains in order to secure costs savings. This should be done as soon as possible so that the soil condition can improve as the land dries out. Similarly, if those areas which are at present under fodder crops could be put down to grass, the sward could be developing for improvement under the main contract to form the fairways.

Table 2 Estimated Costs Of The Golf Course

Based on information supplied by W. Johnston and Partners, August 1975.

	£	£
Demolition + site clearance		13,385.00
Formation of 18 holes (fairways, greens + tees)		100,658.00
Essential tree planting		4,125.00
Rabbit-proof fencing		6,886.00
Provisional Sums		
Clean out ditches and drainage		3,000.00
Irrigation of trees and greens		14,500.00
Standard equipment		1,500.00
Maintenance equipment		10,500.00
Maintenance equipment store		2,000.00
		<u>156,554.00</u>
Contingencies 10%		15,655.00
Preliminaries 5%		8,610.00
		<u>180,819.00</u>
Additional tree planting	3,174.00	
Additional fencing	2,827.00	
	<u>6,001.00</u>	

N.B. Practise green, clubhouse, car park and feed to be added.

The tender arrangements for constructing the golf course could be either:

- 1 Competitive tender
- 2 Negotiated tender

If option 1 was adopted selected golf course contractors known to produce a high standard of work would be invited to submit competitive tenders for the works.

If option 2 was adopted, from a shortlist of golf course contractors known to produce the high standard of work required, a contractor would be selected on the basis of criteria relative to the works. An essential feature of the selection process is the establishment of the price basis for subsequent negotiation. Once a contractor has been selected, as the design evolves the information contained in the price basis is used for cost control, firm bills of quantities are prepared and negotiations on prices proceed until design is complete and an acceptable total price is agreed. A tender can then be submitted by the contractor which automatically becomes acceptable.

There are two main advantages.

- 1 The selection of a contractor at an early stage and the subsequent negotiation of a tender can create a relationship between the architect and the contractor based on mutual confidence, which leads to a better understanding of common problems and helps improve efficiency in the construction process.

- 2 Cost control during design is more positive when prices can be agreed with the contractor as the design evolves.

It should be noted that once an acceptable tender has been submitted by the selected contractor, the contractual agreement is conventional and normal contractual procedures follow. It is recommended, that this form of tender is adopted.

Furthermore, it is an advantage if the greenkeeper is brought in at the beginning of the contract to assist contract supervision and thereby be involved in the construction of the course, he will later be responsible for maintaining.

5.3 Programme

A period of two years is normal from the start of construction to completion of a course for play.

If the go-ahead were given soon, it would be possible for work to begin on site in February 1976 which allows 9 months for finalising design and preparing a contract. The course should be ready for play in Spring 1978.

6 Summary of Proposals and Recommendations

6.1 Proposals

An 18-Hole, par 72, Local Championship standard course can be laid out on Low Barlay with an overall length of 6,485 yards (5,938 metres). The area of the course is 58 hectares (144 acres).

The estimated construction cost of the course is £180,000 which includes an irrigation system for tees and greens, essential tree planting, standard course equipment, maintenance equipment and maintenance equipment store. 5% has been allowed to cover the cost of contract preliminaries and 10% for contingencies. Additional tree planting and fencing, which could be done at a later date, would cost a further £6,000. These figures exclude the costs of constructing a practise green, driving range, clubhouse and car park and professional fees.

6.2 Recommendations

The new Gatehouse-of-Fleet Golf Course should be constructed as soon as possible. Any delay will result in considerable cost increases due to current levels of inflation.

The golf course should be constructed by negotiated tender.

A greenkeeper should be employed from the beginning of the contract period.

Fleuchlarg should be converted into Clubhouse and a screened car park should be constructed adjacent to it.

Acknowledgements

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