

surface. Its light weight, shatterproof qualities are great advantages on site. A 10 ft. length of 4 inch pipe weighs 25 lbs. and an 8 ft. length of 6 inch pipe weighs only 44 lbs.

### **Purpose of Drainage**

Effective sub surface drainage is simply the control of unwanted water. Rain not disposed of by surface run-off, absorption by vegetative cover, evaporation or transpiration, is unwanted water. Rain enters the ground and seeks a given water table. Topography, soil types and strata profiles are the basic factors which determine the hydraulic shape of the water table. Water tables are rarely consistent, seasonal fluctuations can affect the shape and height considerably.

Effective sub surface drainage ensures that the water table is stable, has increased soil bearing strength, minimal frost heave, optimum soil aeration and low soil erosion.

Soil water can be shown to consist of three main types.

**Hydroscopic Water (undrainable).** A thin film of water adhering to soil particles which does not affect soil water or vegetative growth.

**Capillary Water (undrainable).** A film of water around each soil particle providing moisture for vegetable growth which does not affect soil bearing strength.

**Gravitational Water (drainable).** This follows the path of least hydraulic resistance, entering fissures, capillary interstices, seepage zones, underground rivers, etc., until it establishes a ground water table at impervious strata. This type of water fills soil voids below the water table, displaces oxygen, reduces soil bearing strength and discourages the activity of micro organisms. The main purpose of surface drainage is, therefore, to remove and control gravitational water.

### **Why use Pitch Fibre Pipe?**

Pitch fibre perforated pipe has been used very successfully for the drainage of golf course greens, tees and fairways. Clay tiles have been extensively used in the past for this type of drainage, but green keepers are now recognising the advantages of pitch fibre pipe. Pitch fibre pipe, although initially more expensive, over a period of say 50 years shows considerable cost savings because clay tiles lose their effectiveness and quickly silt up. Tiles used under adverse conditions are practically useless after 5 years.

Key Terrain have been manufacturing perforated pitch fibre pipe and conventional drainage pipe for nearly 20 years at their Larkfield factory, having built up considerable expertise in their use. The Technical Service Department of Key Terrain Limited, Larkfield, Maidstone, Kent, are pleased to answer specific questions in the use of pitch fibre pipe.

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## **SITUATION VACANT**

### **ROYAL LYTHAM & ST. ANNES GOLF CLUB**

## **Assistant Head Greenkeeper**

required for Championship course, excellent opportunity for suitable applicant.

*apply with full details to:-*

**The Secretary**

**Royal Lytham & St. Annes Golf Club**

**Links Gate, Lytham St. Annes, Lancs.**

## SITUATIONS VACANT

### Head Greenkeeper

*required by*

**HARTLEPOOL GOLF CLUB  
LIMITED**

House provided  
Salary to be negotiated

Apply giving details of experience,  
age and present employers to the

**Secretary  
Hart Warren  
Hartlepool**

**CHIPPING SODBURY GOLF CLUB**

*require*

### **HEAD GREENKEEPER**

Experienced and qualified applicant  
A new 18-hole Meadowland course  
Accommodation or housing will be  
arranged if required.  
Salary negotiable

*Apply stating age, experience to:*

**The Secretary  
Chipping Sodbury Golf Club  
Chipping Sodbury  
Bristol BS17 6PU**

## RURAL DISTRICT COUNCIL OF DONCASTER CROOKHILL PARK GOLF COURSE

### Appointment of Head Greenkeeper

Within Misc. V - £1,311 - £1,428

Applications are invited from experienced persons for the above post  
at the Council's new 18 hole Golf Course at Crookhill Park near  
Doncaster, due to open during 1973.

Housing accommodation will be made available.

Further details may be obtained from the Engineer and Surveyor,  
Nether Hall, Doncaster to whom applications giving details of  
qualifications and experience, should be returned by

Monday, 4 December, 1972

### **CLASSIFIED ADVERTISEMENTS**

**Used Golf Balls Bought.** Any quantity.  
Price 20p per dozen. Solid and perished  
balls no value. **Sparkbrook Golf Ball Co.  
Ltd.**, 29 Highgate Road, Birmingham 12.

**For Hire.** Sisis Autoturfman Aerator, £25  
per week - do it yourself. For contract prices  
telephone **Burnell**, Eaglescliff 780647.

**Lawn Mower Spares.** Gazelle, Autocretes,  
Minor and Lightweight. Surplus Ransome,  
Genuine spare parts. List less 80% Relf and  
Kendall. Telephone: 01-688 0578.