P2001965 Barnsley - Carlton

Drainage Strategy

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BDP.

Introduction

The proposed development is located in the Carlton area of Barnsley on Royston Lane, see attached location plan. The existing site is a sloping field bisected by Cronkhill Lane and is bounded by fields, Barnsley Canal, Royston Lane and a residential area. It is proposed to construct new educational facilities on the site, including buildings, associated car parks/ hard standing areas and numerous pitches/ sports facilities.

The local Water Authority responsible for the sewers is Yorkshire Water. A full drainage submission is to be made to the Environmental Agency. Barnsley Council is responsible for the canal that bounds the east side of the site.

Foul

There is currently no foul sewage on the existing Greenfield site. The proposed school is a 3 storey building to cater for approximately 1238 pupils and 126 staff. Based on Code of Practice – Flows and Loads 2 this equates to approximately 8.5 l/s. A verbal acceptance of the foul flow from the proposed school into the existing network was agreed with Yorkshire Water in September 2007.

The foul sewage from the proposed school is to be discharged into an existing manhole at the junction of Cronkhill Lane and Royston Lane. Due to site constraints it is not possible to collect and discharge the foul drainage by gravity. Therefore the foul drainage will fall by gravity from the building to a pumping station located in the site close to the proposed school building; from here the foul drainage will be pumped to the proposed discharge point. The proposed pumping station will consist of 2 no. pumps, duty and stand-by, the pumping station will discharge 4l/s and 12hr storage will be provided. The proposed school will drain to the Lundwood Waste Water Treatment Works (WWTW).

Storm

The existing site is Greenfield and there are no drainage arrangements from the site. The proposed development will include a proposed building, proposed hard standing both permeable and impermeable and a number of pitches/ sports facilities both hard standing and grassed.

Approximate areas for the proposed school are given below.

Total Area of Site – 14.3 hectares

Roofs – 6425m^2

Roads – 5050m^2

Hard standing (including hard games court and permeable paving). – 10850m^2

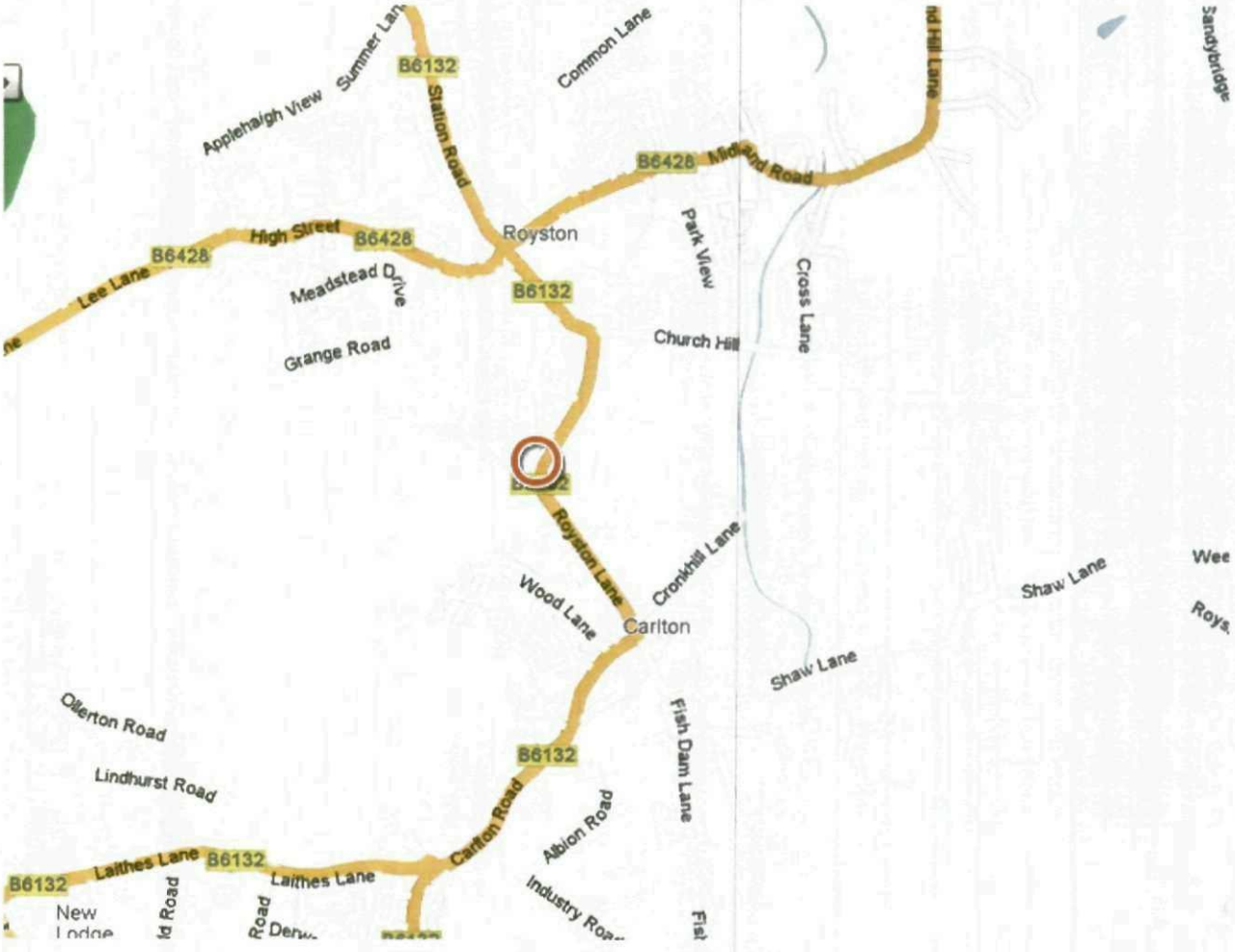
Pitches, Lawns, Grassed Area – 12.06 hectares.

The drainage strategy for the site has been developed through consultation with Yorkshire Water, British Waterways and Barnsley Council. Yorkshire Water has stated it is not possible to discharge any storm run-off to the existing storm network as this cannot accommodate any additional surface water. Barnsley Council has stated that it is not possible to discharge to the watercourse bordering the site (Barnsley Canal) due to proposed works on the canal. Therefore it is proposed that any storm run-off from the proposed development will be collected in a soak-away located beneath the proposed sports pitches.

In line with sustainable development the storm water drainage will be designed as SUDS. All rainwater will be collected from the 'Advanced Learning Centre' roof via downpipes and filtered to a Rainwater Harvesting Tank; this water will be used for irrigation and WC flushing. An overflow from this system will be provided to the soak-away. A number of areas throughout

the scheme such as the car parking bays and pedestrian areas will be permeable paving. The rest of the hardstanding and roads will be collected to the large drainage blanket located below the proposed pitches and exfiltrate into the ground.

The proposed sports pitches will be designed in accordance with Sports England standards, grassed areas will have pipe and slit drainage, which will also discharge to the drainage blanket.


Applehaigh View
Summer Lane
B6132
Station Road
Common Lane
B6428
Midland Road
Hill Lane
Sandybridge
High Street
B6428
B6428
Royston
Park View
Cross Lane
Lee Lane
B6428
Meadstead Drive
B6132
Church Hill
Grange Road
Royston Lane
Cronkhill Lane
Wood Lane
Carlton
Shaw Lane
Shaw Lane
Wee
Roys
Otterton Road
Lindhurst Road
B6132
Fish Dam Lane
Carlton Road
Albion Road
B6132
Laithes Lane
B6132
Laithes Lane
B6132
New
Lodge
Road
Road
Industry Roa
Fish