

Cerys Jones

From: Matthew Phillips
Sent: 12 May 2015 09:56
To: planning_admin
Subject: FW: Ley Farm, Chirk
Attachments: 5823-SK03_A (Drainage Strategy).pdf

Please add email and attachment to P/2014/0739 as drainage plans

From: Andy Jones [mailto:ajones@coopers.co.uk]
Sent: 11 May 2015 16:54
To: Jones-Hughes Henry
Cc: kevin@greenspacearchitects.co.uk; Peter Douthwaite; Matthew Phillips
Subject: RE: Ley Farm, Chirk

5823 Ley Farm, Chirk

Henry

Thanks for the email confirming you can accommodate SW flows at an attenuated rate into the existing surface water sewer. We have updated the drainage strategy drawing to include the SW point of connection.

The attached drawing indicates:

- Foul point of connection into existing combined sewer
- SW point of connection into existing SW sewer
- Proposed SW flow control manhole (S21) restricting flows to greenfield run-off
- Proposed method of attenuation

I hope this now satisfies all concerned that the site can be drained in accordance with current legislation.

Regards

Andy

From: Jones-Hughes Henry [mailto:Henry.Jones-Hughes@dwrcymru.com]
Sent: 11 May 2015 09:25
To: Andy Jones
Cc: kevin@greenspacearchitects.co.uk; Peter.Douthwaite@wrexham.gov.uk; Matthew.Phillips@wrexham.gov.uk
Subject: RE: Ley Farm, Chirk

Dear Andy,

Investigations have demonstrated that this sewer that starts on Crogen and terminates off Offa accommodates surface water. The surface water run-off from the development site can be accommodated within this surface water sewer at an attenuated rate of discharge. If it is your clients intention to utilise this surface water sewer then would be grateful if you could provide an amended plan showing the surface water discharge rate and the point of connection.

Kind regards
Henry



Henry Jones-Hughes

Development Control Officer | Developer Services | Dwr Cymru Welsh Water

PO Box 3146 | Cardiff | CF30 0EH | T: 0800 9172652 | F: 02920 740472 | Ext. 26767

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From: Jones-Hughes Henry

Sent: 01 May 2015 13:27

To: 'Andy Jones'

Cc: 'kevin@greenspacearchitects.co.uk'; 'Peter.Douthwaite@wrexham.gov.uk'; 'Matthew.Phillips@wrexham.gov.uk'

Subject: RE: Ley Farm, Chirk

Hi Andy

I've been out this morning with our networks operatives. The visual inspection didn't reveal what was going on in this area by the playground. We've booked in a CCTV survey for next week which should enable us to trace the network down there and identify what flows are going where. We're also still going through our historic records as this might have been picked up previously

Thanks

Henry



Henry Jones-Hughes

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From: Andy Jones [<mailto:ajones@coopers.co.uk>]

Sent: 29 April 2015 12:16

To: Jones-Hughes Henry

Cc: kevin@greenspacearchitects.co.uk; Peter.Douthwaite@wrexham.gov.uk; Matthew.Phillips@wrexham.gov.uk

Subject: RE: Ley Farm, Chirk

***** External Mail *****

5823 Ley Farm, Chirk

Henry

Thanks for the update.

Regards

Andy

From: Jones-Hughes Henry [<mailto:Henry.Jones-Hughes@dwrcymru.com>]

Sent: 29 April 2015 12:07

To: Andy Jones

Subject: RE: Ley Farm, Chirk

Hi Andy

I understand that the sewer trace will take place this Friday. I will let you know the outcome as soon as I hear

Thanks
Henry



Henry Jones-Hughes

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From: Andy Jones [<mailto:ajones@coopers.co.uk>]

Sent: 22 April 2015 12:59

To: Jones-Hughes Henry

Subject: RE: Ley Farm, Chirk

***** External Mail *****

5823 Ley Farm, Chirk

Hi Henry

Have you had anything back from the sewer trace to confirm the existing network connectivity as per below email?

Regards

Andy

From: Jones-Hughes Henry [<mailto:Henry.Jones-Hughes@dwrcymru.com>]

Sent: 01 April 2015 13:25

To: Andy Jones

Cc: Kevin Slack; Matthew.Phillips@wrexham.gov.uk; Peter.Douthwaite@wrexham.gov.uk

Subject: RE: Ley Farm, Chirk

Hi Andy

I've requested a trace on this part of the network, this should establish any discrepancies in our existing plans. I will keep you informed of the progress of this trace.

The current plan ref 5823/SK03 indicates that surface water will enter a separate combined sewer as opposed to the surface water sewer which leads to the watercourse. We would not allow surface water communication with this combined sewer.

Regards
Henry



Henry Jones-Hughes

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From: Andy Jones [<mailto:ajones@coopers.co.uk>]

Sent: 01 April 2015 12:57

To: Jones-Hughes Henry

Cc: Kevin Slack; Matthew.Phillips@wrexham.gov.uk; Peter.Douthwaite@wrexham.gov.uk

Subject: RE: Ley Farm, Chirk

***** External Mail *****

5823 Ley Farm, Chirk

Thanks Henry

Nature of the sewer

Can you confirm if Welsh Water be investigating this (ie: sewer trace)

Pete – You have said WCBC have no records or knowledge of the culvert. Will this be investigated further by WCBC now we have brought it to your attention?

Remaining flows from site

The Coopers Drainage Assessment states that flows will be restricted to Greenfield QBAR before leaving the site and will be restricted with a flow control manhole. The route of the offsite sewers is shown on plans within the assessment indicating it can be located within the existing highway (not requiring third party consent) and topography allows for a gravity network. I would have thought this would be sufficient at this stage?

Connection to open watercourse

The Coopers Drainage Assessment shows a route though POS. Topography indicates a gravity connection is achievable. Pete – Do you see any issues with such a route if this was implemented (ie: parallel to existing culvert)?

I thought we had provided enough information at this stage for the proposals to be conditioned at planning.

Regards

Andy

From: Jones-Hughes Henry [<mailto:Henry.Jones-Hughes@dwrcymru.com>]
Sent: 01 April 2015 12:09
To: Andy Jones
Cc: Kevin Slack; Matthew.Phillips@wrexham.gov.uk; Peter.Douthwaite@wrexham.gov.uk
Subject: RE: Ley Farm, Chirk

Hi Andy,

Your summary of the on-site geological character is very useful. If an element of the surface water run-off can be taken to on-site infiltration then this should be fully explored.

This may then reduce the amount of surface water leaving the site. I am happy to agree, in principle, to the processes you have set out but I would want further clarification on:

- The nature of the sewer leading up to this watercourse. As you say, there is uncertainty regarding the sewer type and we would want to be sure that the surface water leaving the site doesn't enter the combined network.
- further investigation will be required as to how the remaining surface water will reach this watercourse and the surface water discharge rate into the suspected public surface water sewer.
- If it is found that a direct connection could not be made to this watercourse by way of existing sewer assets, we would need clarification about how an alternative connection to the watercourse will be made.

The suggested conditions to restrict surface water from entering the public sewer should still be utilised until there is a definitive drainage scheme which has been agreed upon.

Regards
Henry



Henry Jones-Hughes

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From: Andy Jones [<mailto:ajones@coopers.co.uk>]
Sent: 01 April 2015 11:39
To: Jones-Hughes Henry
Cc: Kevin Slack; Matthew.Phillips@wrexham.gov.uk; Peter.Douthwaite@wrexham.gov.uk
Subject: RE: Ley Farm, Chirk

***** External Mail *****

5823 Ley Farm, Chirk

Henry

Thanks for the prompt response. I have attached the site plan from the SI report. As you can see 50% of the site area is covered by the former opencast which consists of made ground. Made ground is not generally regarded as suitable for soakaways, due to the potential for inundation settlement and the leaching of contaminants so we would not propose using infiltration techniques in these areas as advised by our geotechnical department.

The borehole logs do indicate potentially suitable strata to the western half of the site, but at depths not suitable for traditional soakaways (BH1=10.4m, BH2=6.6m, BH4=8.7m).

The trial pit logs also indicate some pockets of potentially suitable strata at shallower depths but these are generally described as clayey sand which may not have suitable characteristics for infiltration techniques due to its cohesive content.

The existing site is on a gradient of approx 1:7 falling from east to west. The proposed layout will require areas of cut and fill and will also require many retaining features (see attached proposed levels drawing) to enable suitable development platforms and suitable highway gradients, so any potentially suitable permeable strata could be in areas where ground levels will be changing and could see the target strata made deeper or even being removed as part of the earthworks operation.

We do not consider this site suitable for infiltrating the entire site. A single communal soakaway on the western (lower) end of the site at a depth of approx 10m would not be practical and would be a maintenance liability. However, we do accept there may be some areas of the western half of the site which could be suitable for infiltration by targeting the smaller pockets of potentially permeable strata. This would require assessing the levels and layout to identify potential areas which could be targeted for infiltration tests to determine suitability. The current site investigation is a 'Desk Top Study' and recommends further actions to take the report to a basic (D4) Site Investigation Report. We suggest that infiltration tests are undertaken as part of the site investigation at pre determined locations and depths to suit the layout. The soakaways could potentially serve some plots for disposal of surface water from roof and driveways.

There will still be a need for an outfall outside the site boundary to accommodate flows from the remaining site. As stated in the drainage assessment we propose to discharge in to the culverted watercourse which we appreciate requires further investigation. WCBC have no information on the culvert although we assume this is now classified as ordinary watercourse and would be controlled by WCBC. There also seems to be some uncertainty on the Welsh Water sewer records which show a number of combined sewers discharging into the culvert which is clearly wrong. If the culvert was found to be unsuitable for additional flows, then we could discharge to the open watercourse further downstream.

We consider this to be a robust surface water strategy which follows industry best practice and current guidance. Further work during the site investigation will determine if any areas of the site are suitable for infiltration which follows the hierarchy as set out by Building Regulations.

We hope this clarifies our proposals, but please call me should you want to discuss further.

Regards

Andy Jones
Infrastructure Engineer
COOPERS
Park House, Sandpiper Court, Chester Business Park, Chester, CH4 9QU

☎: (01244) 684910 ☎: Direct Dial No. (01244) 684933
📠: (01244) 684911
✉: ajones@coopers.co.uk
Web: <http://www.coopers.co.uk>

From: Jones-Hughes Henry [<mailto:Henry.Jones-Hughes@dwrcymru.com>]
Sent: 31 March 2015 16:56
To: Andy Jones
Cc: Matthew Phillips
Subject: RE: Ley Farm, Chirk

Dear Andy

Thank you for the report. I note that no infiltration tests have been carried out on site but boreholes have been sunk. The results from the borehole testing does show residual clay in certain areas of the site but it is by no means a completely clay capped site. Therefore there may still be an opportunity for a degree of infiltration even if this means providing infiltration at a deeper level, or in areas where the composition of the substrata allows a degree of infiltration or a wider spread of infiltration across the site.

Infiltration testing should be completed and should be carried out in areas of the site where it is more likely that there is a greater degree of permeability (this can be ascertained from the bore hole testing).

The culvert identified to the North West appears to be a viable option if there is no chance of on-site infiltration. Ive contacted our network engineers to ascertain what sewers are running where and whether there is a surface water sewer that connects to this ditch. If we can ascertain that there is a separate surface water system then this could be utilised to take surface water from the site.

I will look into this and keep you informed but in the meantime I would suggest that the possibility of on-site infiltration is exhausted.

I can also confirm that I have no objections in relation to a foul connection to the public sewer.

Kind regards
Henry



Henry Jones-Hughes
Development Control Officer | Developer Services | Dwr Cymru Welsh Water
PO Box 3146 | Cardiff | CF30 0EH | T: 0800 9172652 | F: 02920 740472 | Ext. 26767

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From: Andy Jones [<mailto:ajones@coopers.co.uk>]
Sent: 31 March 2015 12:04
To: Jones-Hughes Henry
Cc: Kevin Slack
Subject: Ley Farm, Chirk

***** External Mail *****

5823 Ley Farm, Chirk

Henry

In response to your comments in an email dated 9th March 2015 on drainage proposals for the proposed development at Ley Farm Chirk, we have been commissioned to produce the attached Drainage Assessment Report.

Can you please review and confirm this now meets your requirements.

Please call me should you want to discuss the proposals further.

Regards

Andy Jones
Infrastructure Engineer
COOPERS
Park House, Sandpiper Court, Chester Business Park, Chester, CH4 9QU

☎: (01244) 684910 ☎: Direct Dial No. (01244) 684933
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