

[REDACTED]

Mark

The storage provided within the tanked permeable pavement is fine. I would add that we are now happy to see downpipes discharging over permeable pavements to reduce the need for silt traps and diffuser blocks (the downpipe should discharge over a slab and then onto the permeable part, and ensure that water flows over the pavement rather than off of it if close to an edge). Amendments are not necessary but would be accepted, and we may try to take this stance regarding permeable pavements more often in future.

The maintenance issue regarding one metre easements will be acceptable if the commitment to providing a maintenance company to deal with ditches in addition to the permeable paving is stated in the DOC application. This should be an ongoing commitment.

The conditions may be discharged through a DOC application containing the agreed details.

Regards

Tom Callaway

[REDACTED]

[REDACTED]

To: Thomas Callaway

Subject: FW: D1042 - Lake Lane, Barnham Ref: BN/23/16/OUT - Drainage to Discharge Condition 6, 7, 8

Tom,

Please can you let us know if all is ok now at your earliest opportunity as the client wishes to close out all conditions this week.

Regards,

Mark Akmenkalns
Director



Transport Planning and Infrastructure Design Consultants

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From: Robert Attwood

Sent: 07 October 2016 16:43

To

Cc

Subject: D1042 - Lake Lane, Barnham Ref: BN/23/16/OUT - Drainage to Discharge Condition 6, 7, 8

Hi Paul,

Further to your email to my colleague Mark today, please find attached revised drawings.

I trust that the attached drawings are now acceptable and would be grateful if you could now write to confirm that the Land Drainage Consent can be consented and planning conditions 6, 7 & 8 can now be discharged.

With regards,

Robert Attwood

Technician Engineer



Transport Planning and Infrastructure Design Consultants

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1. Noted.

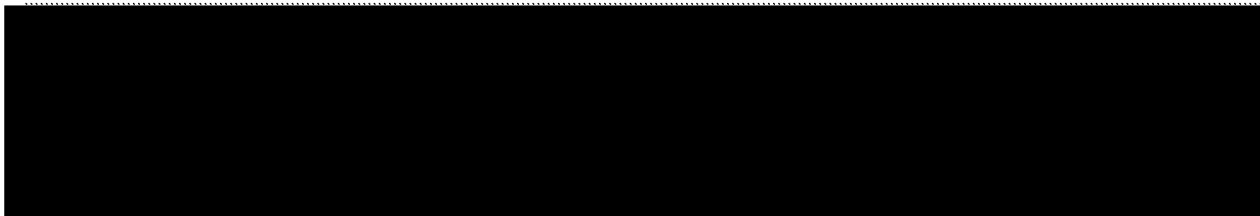
2. The drawings still show the existing culvert adjacent Lake Lane to be incorrect in terms of diameter configuration ie. The existing 450mm/475mm pipe should be shown at the upstream end and the existing 300mm diameter at the downstream end. The previous landowner in his wisdom connected a larger diameter pipe to a smaller one. The long section will also need changing to reflect this. Of course, we will still have a 450mm pipe discharging into a 300mm pipe which is why I was so keen to investigate the removal of the pipe adjacent the TPO tree.
3. Noted.
4. Noted – we are investigating the land ownership to determine who has riparian responsibility.
5. Pipe gradient shown is incorrect. Invert levels on the engineering layout differ to those on the long section.

Please forward revised drawings for approval.

I understand Tom will respond to you regarding the maintenance strip alongside the existing ditch to be retained.

Regards

Paul



Paul/Tom,

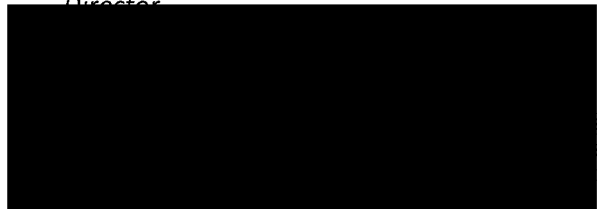
Further to your email we attach the revised drawings and would comment in response in RED as below. We trust that this will now be acceptable and would be grateful if you could now write to confirm that the Land Drainage Consent can be consented and planning conditions 6, 7 & 8 can now be discharged.

We look forward to hearing from you in due course.

Regards,

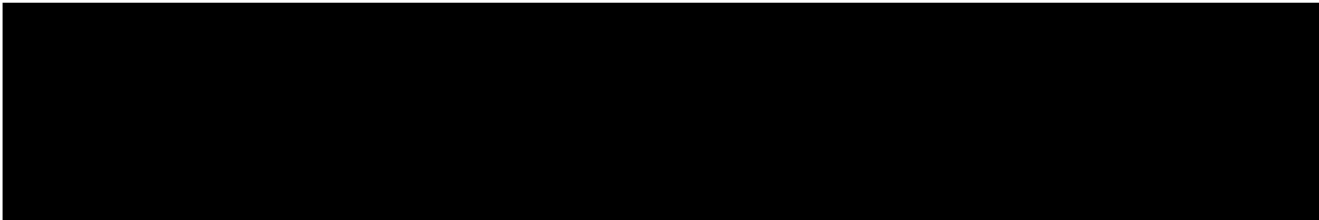
Mark Akmenkalns

Director



Transport Planning and Infrastructure Design Consultants

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Hi Mark

Comments in respect to **Land Drainage Consent**;

1. I have spoken to our tree officer regarding the TPO tree, as the intention would be to have it removed. He has visited site and confirmed it to be a good specimen, so would be reluctant to agree to its removal unless absolutely necessary. On that basis, I suggest that the section of culvert adjacent the tree is retained as proposed and CCTV surveyed to confirm its condition (add note to drawing). If the tree is found to be causing issues with the culvert, either now or in the future, then the situation will need to be reviewed. Any necessary remedial works identified by the CCTV survey will need to be undertaken as part of the development. (add note to drawing). Noted. Drawing annotation has been updated to clarify CCTV requirement.
2. The existing culvert alongside Lake Lane to be retained is shown on your plan as 450mm diameter at the downstream end, but in reality this is 300mm diameter. The upstream end is 450mm/475mm diameter. It is hoped that where you are replacing part of the existing culvert, you will be removing the section where the two different pipe diameters join and therefore removing a potential issue. The proposed new manhole will need to be a sump type (provide detail) and 1350mm diameter rings. The 450mm and 300mm culvert will need to be laid invert to invert within the manhole (add note). The long section needs to reflect the pipe diameters (ie.450/300mm). The ground level (6.86) is still incorrect on the section. Noted. Drawing annotation has been updated.
3. Specify horizontal scale on all long sections. Re-word to the 150mm deep ST4 concrete bedding on all the sections to say '150mm ST4 concrete bed and surround' to make it clearer to the contractor. Noted. Drawing annotation has been updated.
4. I note the 150mm culvert on the eastern boundary of the site to be jetted. However, this pipe should be removed and the ditch reinstated, as I assume this crossing is no longer required. If the crossing needs to be retained, then the culvert needs to be upsized. The remainder of the ditch also needs to be cleaned out. Noted. We attach a copy of our client's ownership confirming that this section of watercourse lies on 3rd party land and as a result has been omitted from our proposals.
5. The proposed 300mm culvert in the south west corner of the site needs to be improved further in terms of its angle of connection with the ditches in order to remove the 90 degree angles. I understand that land ownership of your client extends beyond the red line shown on your plan, so this should be possible to achieve. Specify gradient on section. Headwall A and B sections indicate the pipe to be clay and concrete – please specify which is correct, and include pipe crushing strength/class. Noted. This has been adjusted to your request.

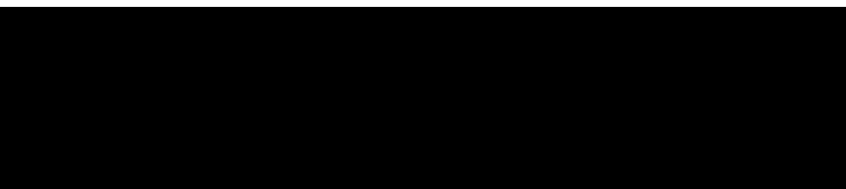
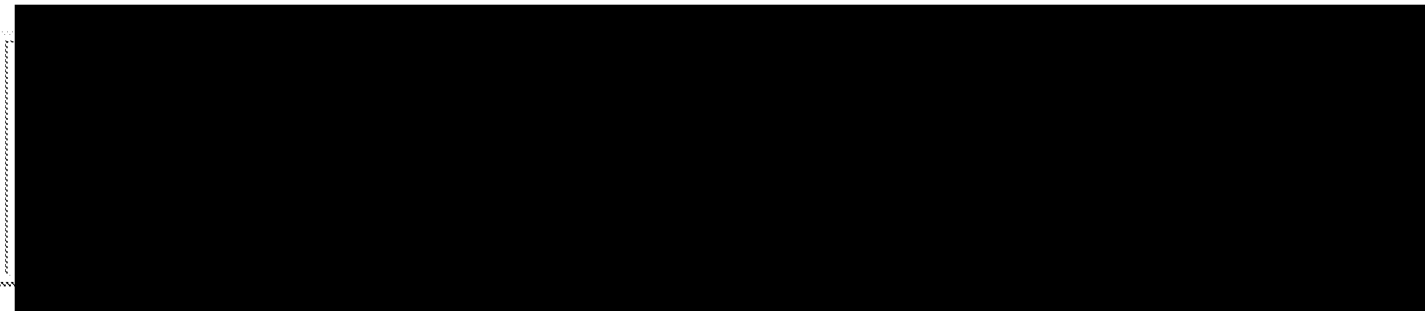
Easement response

The planning officer would be agreeable to a compromise that reduces garden sizes slightly on the two western plots, potentially allowing for up to a 2 metre easement for access and maintenance of the ditch. The access and maintenance of the ditch could be considered more important than the minimum garden size in this location. Please refer to Tom if you have any queries in this respect. Noted, however our client is not prepared to reduce the garden sizes any further as this would be significant in terms of the plot value. To address your concerns of future maintenance issues here, our client has confirmed that a management company will be in place to cater for the shared access drive and the watercourse behind plots 1 & 2.

Look forward to receiving your revised details.

Regards

Paul Cann
Senior Engineer (Drainage & Coastal)



Subject: D1042 - Lake Lane, Barnham Ref: BN/23/16/OUT - Drainage to Discharge Condition 6, 7, 8

Tom/Paul,

Thank you for your email comments dated 02.90.2016 & 07.09.2016. We attach a revised drawing set to reflect the minor revisions and would summarise as follows:

1. The new access culvert is now shown as 450mm diameter to match the existing.
2. Your request to revert a portion of the existing culvert to open ditch is not feasible given that tree T2 is protected under tree preservation order TPO/BN/13 issued by Arun DC. Any attempts to form a ditch profile here will expose the roots and ultimately kill the tree. We have annotated the existing 300mm diameter culvert to be upgraded to 450mm diameter, however the contractor will need to investigate the total length required and execute being cautious of the tree. We maintain our proposal to install an online manhole to discharge the porous pavement as it is not feasible to discharge this to the ditch with a downstream flow and we are constraint by numerous TPO trees (See green zones).
3. The existing 225mm diameter culvert in vicinity of section C-C will be removed and replaced with a new 300mm diameter culvert. This will be installed slightly deeper as the downstream section will be locally regraded towards the larger watercourse running parallel with Lake Lane.
4. The ditches you specified will be locally cleared of debris, silt and locally regraded. This is now clarified further on drawing 007.
5. All sections now specify pipe materials, strengths and pipe bedding.

Maintenance/Easements

As discussed your request for 3m easements for very minor watercourses is excessive and cannot be achieved. Our client is implementing a planning approved layout and Arun DC has not at any time requested this element to be incorporated into the general arrangement. This requirement would significantly affect the garden sizes (agreed by the planning officer) and ultimately the purchase price.

We have already offered a nominal betterment over the current approved planning layout by provision of a nominal 900mm maintenance strip together with rear gate access which we consider appropriate in this instance. In

addition, our client will give some consideration to the type/style of fencing which could perhaps allow for some fence panels to be easily removed.

We trust that the above meets with your approval and look forward to hearing from you shortly.

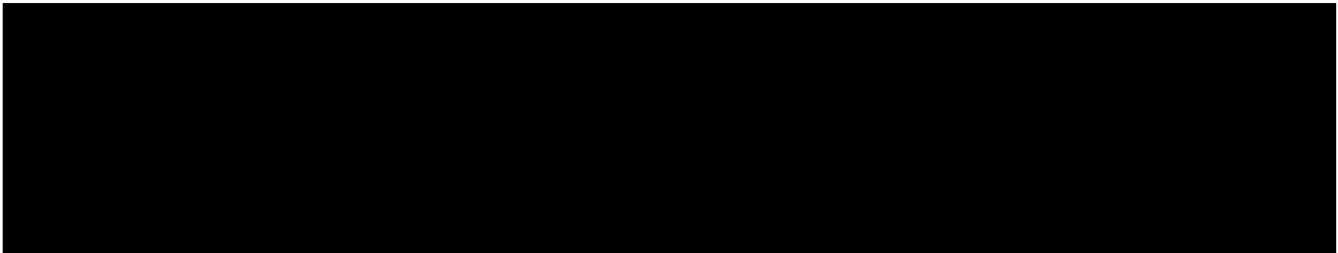
Regards,

Mark Akmenkalns
Director



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Mark

Thanks for providing these details.

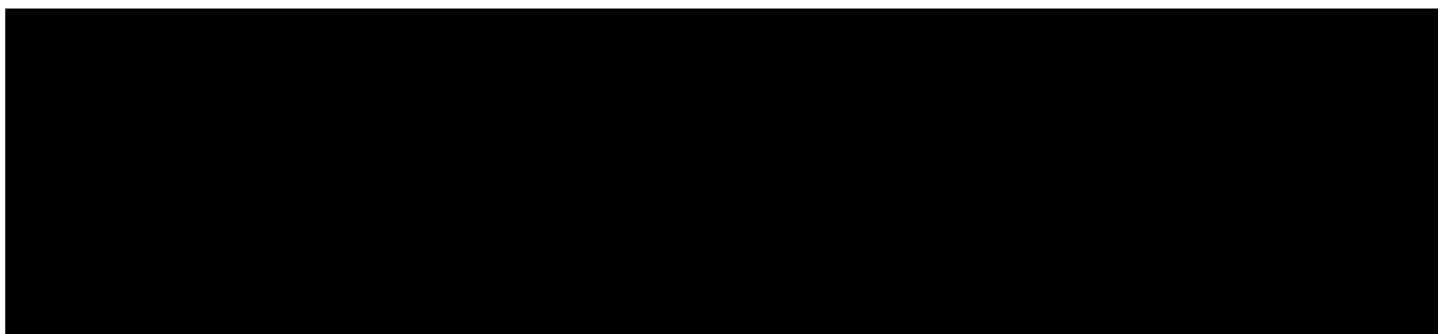
The permeable paving storage design is fine. The two adjacent development sites have also had to rely on attenuation and restricted discharge to a watercourse due to high groundwater and low soakage rates in the soil.

The easements for the access and maintenance of all ditches should be set at three metres. An easement of 900mm would not provide access to a machine/vehicle or provide any area for leaving spoil prior to disposal. It would also encourage dumping being close to the boundary fences.

Paul will be providing comments on land drainage consent issues, so details regarding the outlet from the permeable paving may need to change dependent on Paul's comments.

Regards

Tom Callaway





Paul/Tom,

Our client has recently obtained planning approval for the above site and wishes to progress matters with a view to discharge the planning conditions 6, 7 & 8. I also write to you to seek approval for matters relating to works impacting on ordinary watercourses and an existing culvert which passes through the site. I attach the following information:

- Arun DC Decision Notice date: 19th July 2016
- RGP Drawings 002, 003, 004, 005, 006
- RGP Porous Pavement Calculations (Microdrainage)
- OWC Application (Fee of £150 to be supplied by client under separate cover)
- Method Statement (inc environmental impact)
- WSCC 278-38 Confirmation Email for vehicle crossover

Planning Decision Notice Summary

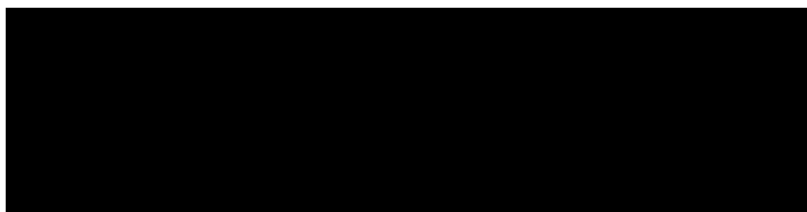
1. It is evident that planning condition 6 incorporates a requirement for groundwater monitor. Please note that percolation testing and groundwater mon was previously supplied within the planning approved drainage strategy report.
2. We consider the above attachment provide sufficient information for conditions 6 & 7.
3. With regards to condition 8, a suitable maintenance strip of 900mm has been incorporated along each top of bank within the site. In addition, each tenant will have a boundary gate access where applicable to enable riparian duties to be met.

I trust that the above is sufficient to enable you to provide a formal response recommending that condition No. 6, 7 & 8 can now be discharged by the planning officer.

We look forward to hearing from you in due course.

Regards,

Mark Akmenkalns
Director



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