

Julie Grieves

From: Anita Gardner
Sent: 31 August 2017 12:25
To: Julie Grieves
Subject: FW: 40923 - Audi Worthing - Amended Drainage Strategy A/77/17/DOC

Please can this e-mail be added to the application A/161/17/DOC

Anita Gardner | Principal Planner, Directorate of Place, [Arun District Council](#) | Location: First Floor, Arun Civic Centre, Maltravers Road, Littlehampton, BN17 5LF

Internal: 37529 | External: +44 (0) 1903 737529 | E-mail: anita.gardner@arun.gov.uk

Visit Arun's web site at www.arun.gov.uk



Save the environment - think before you print.

Sent: 31 August 2017 10:40
To: Paul Cann; Anita Gardner
Cc: Hugh Parker; david hawtin; Garry Davies
Subject: RE: 40923 - Audi Worthing - Amended Drainage Strategy A/77/17/DOC

Paul,

We will update the drawing to reflect your comments.

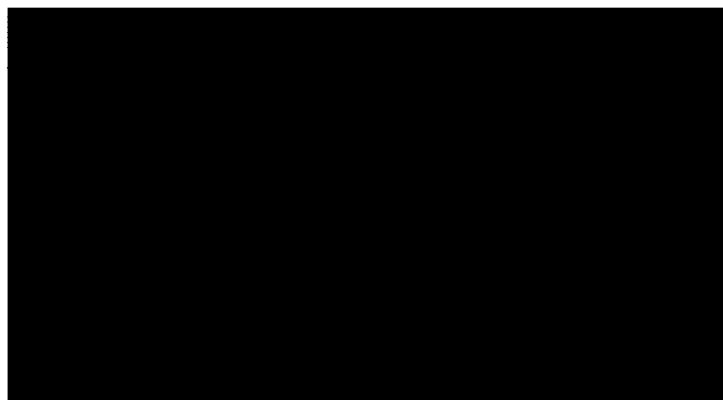
With regard to the historical pipework, this note is a legacy note. This existing drainage has been investigated and has been confirmed that it only served the former greenhouses and access road (which we are now picking up in our system).

There is adequate cover (from a structural perspective) for the perforated pipes within the soakaway trenches, as they have a minimum of 600mm cover. In addition, the trenches will be lined and covered with terram to prevent fines entering the stone voids.

We have not had any direct communication with the EA for this project, as we would not expect to need to. However, as we are discharging the parking areas through the stone within the soakaways, this has been an accepted philosophy (from an EA perspective) on other projects.

Regards,

Steve English
Director



Eastwood & Partners (Consulting Engineers) Ltd is a company registered in England and Wales registered No 1835021.

[REDACTED]

Email confidentiality notice: This message is private and confidential. If you have received this message in error, please notify us and remove it from your system.

[REDACTED]

Sent: 31 August 2017 10:23

To: 'Steve English'; Anita Gardner

[REDACTED]

Subject: RE: 40923 - Audi Worthing - Amended Drainage Strategy A/77/17/DOC

Hi Steve

I have finally managed to have a quick look at your revised proposals. My comments are below;

1. Increase overflow pipe diameters to 150mm and specify a class Z bedding on each one.
2. I note the existing surface water pipe that crosses the site and your intention to fully investigate it. Whilst this will fall outside this planning condition (no.4), I would be grateful if you could keep me updated on your findings.
3. Regarding the perforated pipes located above the soakaways, can you specify/confirm how the pipes will be protected from vehicular loadings, due to the lack of cover.
4. Have you discussed the scheme with the Environment Agency in terms of any requirement for oil interceptors, particularly for the larger car park.

Regards

Paul Cann

Senior Engineer (Drainage & Coastal)

Paul Cann | Senior Engineer (Drainage & Coastal), Engineering Services, Arun District Council | Location: First Floor, Arun Civic Centre, Maltravers Road, Littlehampton, BN17 5LF

Internal: 37819 | External: +44 (0) 1903 737819 | Fax: +44 (0) 1903 716019 | E-mail: Paul.Cann@arun.gov.uk

Arun is Working in Partnership with Chichester District Council

Visit Arun's web site at <http://www.arun.gov.uk/> and www.chichester.gov.uk



Save the environment - think before you print.

[REDACTED]

Sent: 25 August 2017 13:17

To: Paul Cann; Anita Gardner

[REDACTED]

Subject: 40923 - Audi Worthing - Amended Drainage Strategy

Paul,

Further to my email below and our subsequent telephone conversation earlier today, please find attached an updated PDF copy of our Drainage Strategy following our discussions. This supersedes yesterday's emailed report.

As requested, we have added the overflow links between the soakaway systems, highlighted the level of protection to the 225 dia. Drain passing under the building, shown the roof RWP's and provided our Drainage Details information. Hopefully, this addresses all your queries regarding the proposed external drainage design.

As discussed, the design philosophy has previously been agreed with both you and Thomas Callaway (previously by email dated 16 March 2017 – further down this email thread). With regard to addressing surface water requirements, percolation to ground is the only option to accommodate rainfall, as there are no sewers or water courses in the vicinity of the site. As such, we have designed the system to accommodate the 1 in 100 year events, plus climate change, based upon the “worst case” percolation rates recorded during site investigations. Therefore, it is our opinion that we have provided a fully justifiable drainage system that complies with the design requirements.

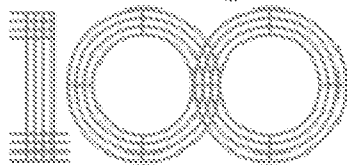
If you have any further queries, please do not hesitate to contact us.

Regards,



Eastwood&Partners
CONSULTING ENGINEERS

New Civil Engineer



COMPANIES OF THE YEAR 2016



Eastwood & Partners (Consulting Engineers) Ltd is a company registered in England and Wales registered No 1835021.
Registered office: St Andrew's House, 23 Kingfield Road, Sheffield, S11 9AS
Web: www.eastwoodandpartners.com
Tel: 0114 255 4554

Email confidentiality notice: This message is private and confidential. If you have received this message in error, please notify us and remove it from your system.



Sent: 24 August 2017 12:31

To: Paul Cann

From: [Redacted]

Subject: 40923 - Audi Worthing - Amended Drainage Strategy [Filed 25 Aug 2017 08:37]

Paul,

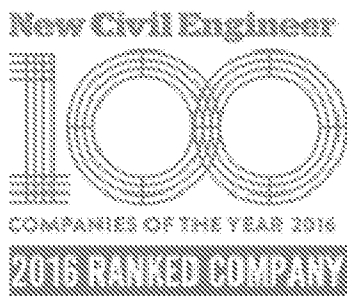
Further to the email thread below, please find attached a PDF copy of our amended Drainage Strategy for the new Audi Dealership project at Angmering.

This document has been revised to incorporate the additional percolation test results taken on site last week.

Regards,

Steve English
Director

Eastwood&Partners
CONSULTING ENGINEERS



and Wales registered No 1835021.

received this message in error, please notify us and remove it

Sent: 27 June 2017 17:10

To: 'Steve English'

Subject: RE: 40923 - Audi Worthing - Initial Proposed Drainage Strategy

Steve

In this case, and bearing in mind you already have some winter percolation rates on parts of the site, may I suggest that the demolition is carried out and further tests undertaken as soon as possible in the critical areas that were occupied by buildings. Once these results are known, we can then compare these to the winter results elsewhere on the site and apply a safety factor to the new rates (factor to be agreed).

Regards

Paul Cann
Senior Engineer (Drainage & Coastal)

Paul Cann | Senior Engineer (Drainage & Coastal), Engineering Services, Arun District Council | Location: First Floor, Arun Civic Centre, Maltravers Road, Littlehampton, BN17 5LF

Internal: 37819 | External: +44 (0) 1903 737819 | Fax: +44 (0) 1903 716019 | E-mail: Paul.Cann@arun.gov.uk

Arun is Working in Partnership with Chichester District Council

Visit Arun's web site at <http://www.arun.gov.uk/> and www.chichester.gov.uk



Save the environment - think before you print.

Sent: 27 June 2017 16:54

To: Paul Cann

Cc: Hugh Parker; david hawtin; Garry Davies; Anita Gardner; Juan Baeza

Subject: RE: 40923 - Audi Worthing - Initial Proposed Drainage Strategy

Paul,

Whilst it is good to see progress on this project to have it agreed that demolition of the existing greenhouses is required in order to be able to undertake the additional investigation work. The project can't afford to wait for the next winter period in order to undertake the additional percolation testing.

It is appreciated that the winter months are considered the best time to undertake the tests to establish "worst case" percolation rates. However, there is no guarantee that testing in winter would in fact coincide with a wet period. The suitability of the ground for soakaways has already been established and reported upon previously (see email thread below and attached PDF). We are simply looking to provide additional justification for the percolation rates used at this stage in the drainage design.

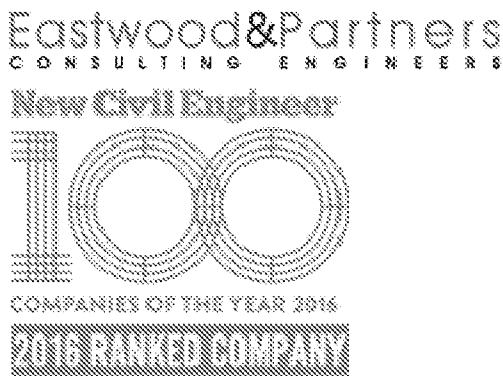
Appropriate assessment and review of any additional percolation rates obtained, with the tests intended to be carried at the earliest opportunity, would of course be undertaken. An appropriate adjustment (if required) for the "design percolation rate" to be considered would also be applied.

As such, in our opinion we have already provided a full and appropriate Drainage Strategy, which includes a fully designed drainage layout. This strategy had previously been agreed (and confirmed as acceptable) with Arun District Council.

It is our opinion that sufficient information has been provided to discharge the drainage related pre-commencement condition and that, as stated in the previously attached email from Anita, the greenhouses can be demolished in order for us to be able to do additional percolation tests.

Regards,

Steve English
Director



from your system.

Sent: 27 June 2017 15:53
To: 'Steve English'

Subject: RE: 40923 - Audi Worthing - Initial Proposed Drainage Strategy

Steve

See enclosed email from Anita. This will allow you to undertake the additional percolation tests (in the winter) in order to be able to finalise the drainage design.

Regards

Paul Cann
Senior Engineer (Drainage & Coastal)

Paul Cann | Senior Engineer (Drainage & Coastal), Engineering Services, Arun District Council | Location: First Floor, Arun Civic Centre, Maltravers Road, Littlehampton, BN17 5LF

Internal: 37819 | External: +44 (0) 1903 737819 | Fax: +44 (0) 1903 716019 | E-mail: Paul.Cann@arun.gov.uk

Arun is Working in Partnership with Chichester District Council

Visit Arun's web site at <http://www.arun.gov.uk/> and www.chichester.gov.uk



Save the environment - think before you print.

From: Paul Cann

Sent: 27 June 2017 14:09

To: 'Steve English'

Subject: RE: 40923 - Audi Worthing - Initial Proposed Drainage Strategy

Steve

I am still waiting to hear from the planning officer regarding the demolition aspect, (ie. commence demolition before discharge of the surface water drainage pre-commencement condition) due to the need to undertake more testing. I have copied them into this email, so they know you are chasing.

Regards

Paul Cann

Senior Engineer (Drainage & Coastal)

Paul Cann | Senior Engineer (Drainage & Coastal), Engineering Services, Arun District Council | Location: Second Floor, Arun Civic Centre, Maltravers Road, Littlehampton, BN17 5LF

Internal: 37819 | External: +44 (0) 1903 737819 | Fax: +44 (0) 1903 716019 | E-mail: Paul.Cann@arun.gov.uk

Arun is Working in Partnership with Chichester District Council

Visit Arun's web site at <http://www.arun.gov.uk/> and www.chichester.gov.uk



Save the environment - think before you print.

From: Steve English [<mailto:Steve.English@eastwoodandpartners.com>]

Sent: 27 June 2017 13:45

To: Paul Cann

Cc: Hugh Parker; david hawtin; Garry Davies

Subject: RE: 40923 - Audi Worthing - Initial Proposed Drainage Strategy

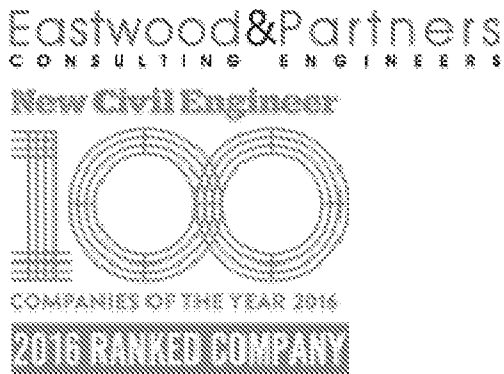
Paul,

Please would you provide a status update on this project and the response to the email thread below.

Thank you. If you have any further queries, please do not hesitate to contact us.

Regards,

Steve English
Director



Eastwood & Partners (Consulting Engineers) Ltd is a company registered in England and Wales registered No 1835021.
Registered office: St Andrew's House, 23 Kingfield Road, Sheffield, S11 9AS
Web: www.eastwoodandpartners.com
Tel: 0114 255 4554

Email confidentiality notice: This message is private and confidential. If you have received this message in error, please notify us and remove it from your system.

From: Paul Cann, Emily, Paul Cann, @ [redacted]

Sent: 05 June 2017 12:18

To: 'Steve English'

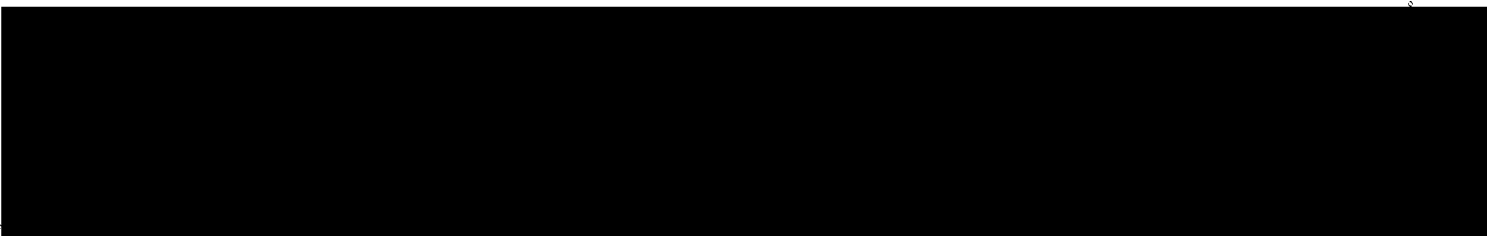
Subject: RE: 40923 - Audi Worthing - Initial Proposed Drainage Strategy [Filed 05 Jun 2017 12:35]

Steve

Until I find a replacement for Tom, I will deal with this application. I am currently in discussion with the planning officer in respect to the pre commencement condition and will get back to you shortly.

Regards

Paul Cann
Senior Engineer (Drainage & Coastal)



Sent: 23 May 2017 16:58

To: Paul Cann

Subject: 40923 - Audi Worthing - Initial Proposed Drainage Strategy

Paul,

Planning Ref: A/77/17/DOC

It is our understanding that you have now taken over responsibility for the proposed new Audi dealership at Angmering. We have the following comments to make.

The Planning Officer has drawn to our attention the response you have provided as a Consultee.

We had previously discussed and agreed our proposed approach for this project with Thomas Callaway (please see the email thread below), whom we understand has now left the Authority. It was through this discussion and subsequent agreement that we based our Drainage Strategy for the project (PDF copy attached).

We have also had the attached correspondence from Southern Water confirming that there are no public sewer's serving the site.

In addition, we have undertaken a CCTV drainage survey of the private surface water drain crossing the site. This only serves the Haskins access road and former Haskins greenhouses. It is our understanding that this drain ultimately drains to soakaways on the Haskins site. As such, it is our intention to cap off the up-stream section of this drain as it enters the Caffyns site, such that no surface water is drained off site via the Haskins developments soakaway provisions.

As it stands, the scheme proposals are to address all drainage (both surface water & foul drainage) within the curtilage of the Caffyns site.

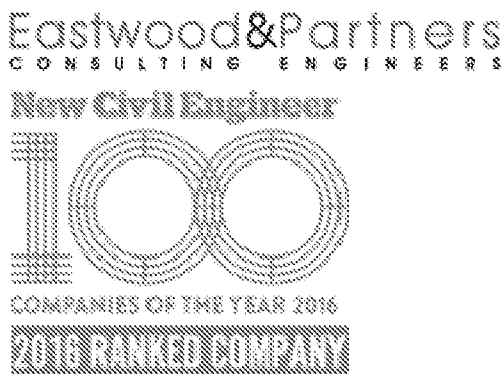
Percolation tests have been undertaken and the lowest figures of which have been used to base the drainage design on. Furthermore, until such a time that the drainage pre-commencement conditions have been discharged, no development (including demolition) can take place. As such, if we can't demolish the existing greenhouses, then additional percolation/soakaway tests cannot be undertaken.

We would be grateful if you would undertake a further review the email thread below and the attached documents, with regard to the proposed drainage strategy for this scheme as it is, in our opinion, appropriate and reasonable.

Regards,

Steve English

Director



Eastwood & Partners (Consulting Engineers) Ltd is a company registered in England and Wales registered No 1835021.

Registered office: St Andrew's House, 23 Kingfield Road, Sheffield, S11 9AS

Web: www.eastwoodandpartners.com

Tel: 0114 255 4554

Email confidentiality notice: This message is private and confidential. If you have received this message in error, please notify us and remove it from your system.

Sent: 16 March 2017 13:51

To: 'Steve English'

Subject: [pending]RE: 40923 - Audi Worthing - Initial Proposed Drainage Strategy

Steve

The principal for the surface water drainage design is fine. I have asked the planning officer to get back to you confirming what will be possible regarding the wording of the condition.

Regards

Tom Callaway

Sent: 14 March 2017 23:46

To: Thomas Callaway

Subject: 40923 - Audi Worthing - Initial Proposed Drainage Strategy

Tom,

Planning Application Ref: A/162/15/PL

Further to our telephone conversation yesterday regarding the proposed new Audi Dealership on the A259/Roundstone By-pass, Angmering, we have the following comments to make.

We have been appointed as Civil and Structural Engineers for the project and, as discussed, we wish to propose a drainage strategy for the development. Our proposed strategy differs from that produced by The Civil Engineering Practice in October 2016 (which had been developed following discussions with you). For your ease of reference (and as we have, at this stage, based our initial design information on design parameters within this document), please find attached a PDF copy of this document for your information.

Please also find attached a PDF copy of our initial sketch proposals detailing the fundamental principles behind our proposed drainage strategy for the site.

The surface water drainage proposals for this scheme follow the same principles that we adopted for our drainage design for the recently completed BMW Worthing dealership (just off the A259 approx. 1 mile from this location), which we liaised with you to obtain the required consents.

It is our proposal to collect the surface water run-off from the building and hard paved vehicle display/storage areas and discharge it to ground via a series of soakaway trenches designed to accommodate a 1 in 100 year rainfall event (plus 30% for climate change). The extent of soakaway trench, associated storage required (including within the manhole chambers/silt traps etc.) and any required above ground storage will be based upon the percolation test results obtained to date. As discussed, it is our proposal to utilise above ground storage (i.e. nominal surface ponding) for the additional 30% climate change only, for the rear compound area. Potential exceedance of this additional above ground storage would overtop the perimeter kerb and discharge to the adjacent strips of soft landscaping within the site boundary – this has been discussed and agreed with the end user/Client as acceptable. All other areas, including roof drainage, will be designed to accommodate the 1 in 100 year plus 30% below ground.

Based on the percolation test results available, the current underside of soakaway trench is expected to be at a depth of approximately 2.3 m, i.e. 1.0 m above the highest recorded ground water level.

It should be noted that the majority of the external hard standing area is for the storage or display of new/nearly new cars. There will be very little associated vehicle movements and these vehicles (in turn) will be kept clean (via the car wash down/valeting area) and free from potential surface water contaminants. As such, there is not likely to be any significant contaminants exposed to the surface water run-off that would need treatment. The gullies/drainage channels specified, will be trapped and have silt buckets that further assist in the removal of any suspended solids. There are not expected to be any significant source of metals to contaminate the surface water discharge from the site. Nor are there expected to be any significant hydrocarbon contaminants to be treated, as could be potentially expected in a public/supermarket car park for example.

As discussed briefly, permeable paving is not considered viable for this type of development in this location due to the presence of clay/underlying impermeable ground conditions close to the surface and the fact that maintenance of this type of surfacing would prove to be impracticable due to the logistics of removing and storing all the display vehicles etc. The proposed soakaway trench solution would facilitate the opportunity for future maintenance (or in the most severe case, a phased replacement/re-excavation of soakaway trenches).

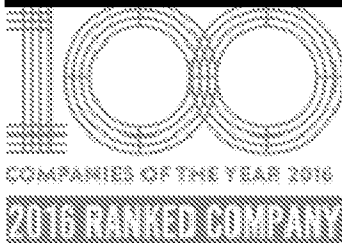
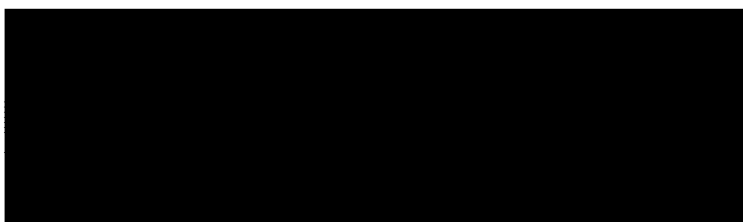
The foul drainage provision from the development will be a traditional cesspit/tank to serve the toilets/canteen/building foul drainage. The car valet building will have a closed loop full recycling system by specialist manufacturer. In short, there will be no piped foul discharge from the site or foul discharge to ground for this development.

It is our understanding following our telephone discussion, that the above drainage strategy (as detailed on the attached sketch proposal) for this development is acceptable to you/Arun District Council. We will, of course, produce a full drainage design and associated design calculations/scheme justification in due course for approval. In the meantime however, we would be grateful if you would confirm that the above correctly reflects our conversation and that you are satisfied with our approach to the foul and surface water drainage requirements for this development.

It should be noted that, at this time, we require confirmation that this Drainage Strategy is acceptable, in order for the pre-commencement planning condition to be discharged so that demolition of the existing buildings on the site can be carried out. Once this has been achieved, we will be in a position to undertake additional percolation tests/site investigation work to further justify the final drainage design. At this time the existing former greenhouses (formerly part of the Haskins development, which are currently positively drained into the Haskins current soakaway system) cover the majority of the area of the proposed rear storage compound (i.e. location of the proposed soakaways). As such and as discussed yesterday, we are unable to undertake these additional tests in this area until such a time that demolition is permitted.

If you have any further queries, please do not hesitate to contact us.

Regards,



Eastwood & Partners (Consulting Engineers) Ltd is a company registered in England and Wales registered No 1835021.
Registered office: St Andrew's House, 23 Kingfield Road, Sheffield, S11 9AS
Web: www.eastwoodandpartners.com
Tel: 0114 255 4554

Email confidentiality notice: This message is private and confidential. If you have received this message in error, please notify us and remove it from your system.



Please Read:
Information in this message is confidential and may be legally privileged. It is intended solely for the person to whom it is addressed. If you are not the intended recipient, please notify the sender and delete the message from your system immediately. It is your responsibility to check this email for viruses and Eastwood & Partners cannot be held responsible for any resulting loss or damage in the event that this message or any attachments contains a virus

<http://www.arun.gov.uk>
NLPG UPRN 100062237016
DX 57406 Littlehampton

Important Notice This e-mail is intended exclusively for the addressee and may contain information that is confidential and/or privileged. If you are not the intended recipient (or authorised to receive it for the addressee), please notify the sender and delete the e-mail immediately; using, copying, or disclosing it to anyone else, is strictly prohibited and may be unlawful. Any views, opinions or options presented are solely those of the author and do not necessarily represent those of Arun District Council. The information in this e-mail may be subject to public disclosure under the Freedom of Information Act 2000, therefore we cannot guarantee that we will not provide the whole or part of this e-mail to a third party. The Council reserves the right to monitor e-mails in accordance with relevant legislation. Whilst outgoing e-mails are checked for viruses, we cannot guarantee this e-mail is virus-free or has not been intercepted or changed and we do not accept liability for any damage caused. Any reference to "e-mail" in this disclaimer includes any attachments.



Please Read:
Information in this message is confidential and may be legally privileged. It is intended solely for the person to whom it is addressed. If you are not the intended recipient, please notify the sender and delete the message from your system immediately. It is your responsibility to check this email for viruses and Eastwood & Partners cannot be held responsible for any resulting loss or damage in the event that this message or any attachments contains a virus

<http://www.arun.gov.uk>
NLPG UPRN 100062237016
DX 57406 Littlehampton

Important Notice This e-mail is intended exclusively for the addressee and may contain information that is confidential and/or privileged. If you are not the intended recipient (or authorised to receive it for the addressee), please notify the sender and delete the e-mail immediately; using, copying, or disclosing it to anyone else, is strictly prohibited and may be unlawful. Any views, opinions or options presented are solely those of the author and do not necessarily represent those of Arun District Council. The information in this e-mail may be subject to public disclosure under the Freedom of Information Act 2000, therefore we cannot guarantee that we will not provide the whole or part of this e-mail to a third party. The Council reserves the right to monitor e-mails in accordance with relevant legislation. Whilst outgoing e-mails are checked for viruses, we cannot guarantee this e-mail is virus-free or has not been intercepted or changed and we do not accept liability for any damage caused. Any reference to "e-mail" in this disclaimer includes any attachments.



Please Read:
Information in this message is confidential and may be legally privileged. It is intended solely for the person to whom it is addressed. If you are not the intended recipient, please notify the sender and delete the message from your system immediately. It is your responsibility to check this email for viruses and Eastwood & Partners cannot be held responsible for any resulting loss or damage in the event that this message or any attachments contains a virus

<http://www.arun.gov.uk>
NLPG UPRN 100062237016
DX 57406 Littlehampton

Important Notice This e-mail is intended exclusively for the addressee and may contain information that is confidential and/or privileged. If you are not the intended recipient (or authorised to receive it for the addressee), please notify the sender and delete the e-mail immediately; using, copying, or disclosing it to anyone else, is strictly prohibited and may be unlawful. Any views, opinions or options presented are solely those of the author and do not necessarily represent those of Arun District Council. The information in this e-mail may be subject to public disclosure under the Freedom of Information Act 2000, therefore we cannot guarantee that we will not provide the whole or part of this e-mail to a third party. The Council reserves the right to monitor e-mails in accordance with relevant legislation. Whilst outgoing e-mails are checked for viruses, we cannot guarantee this e-mail is virus-free or has not been intercepted or changed and we do not accept liability for any damage caused. Any reference to "e-mail" in this disclaimer includes any attachments.

Please Read:

Information in this message is confidential and may be legally privileged. It is intended solely for the person to whom it is addressed. If you are not the intended recipient, please notify the sender and delete the message from your system immediately. It is your responsibility to check this email for viruses and Eastwood & Partners cannot be held responsible for any resulting loss or damage in the event that this message or any attachments contains a virus

<http://www.arun.gov.uk>

NLPG UPRN 100062237016

DX 57406 Littlehampton

Important Notice This e-mail is intended exclusively for the addressee and may contain information that is confidential and/or privileged. If you are not the intended recipient (or authorised to receive it for the addressee), please notify the sender and delete the e-mail immediately; using, copying, or disclosing it to anyone else, is strictly prohibited and may be unlawful. Any views, opinions or options presented are solely those of the author and do not necessarily represent those of Arun District Council. The information in this e-mail may be subject to public disclosure under the Freedom of Information Act 2000, therefore we cannot guarantee that we will not provide the whole or part of this e-mail to a third party. The Council reserves the right to monitor e-mails in accordance with relevant legislation. Whilst outgoing e-mails are checked for viruses, we cannot guarantee this e-mail is virus-free or has not been intercepted or changed and we do not accept liability for any damage caused. Any reference to "e-mail" in this disclaimer includes any attachments.

Please Read:

Information in this message is confidential and may be legally privileged. It is intended solely for the person to whom it is addressed. If you are not the intended recipient, please notify the sender and delete the message from your system immediately. It is your responsibility to check this email for viruses and Eastwood & Partners cannot be held responsible for any resulting loss or damage in the event that this message or any attachments contains a virus

<http://www.arun.gov.uk>

NLPG UPRN 100062237016

DX 57406 Littlehampton

Important Notice This e-mail is intended exclusively for the addressee and may contain information that is confidential and/or privileged. If you are not the intended recipient (or authorised to receive it for the addressee), please notify the sender and delete the e-mail immediately; using, copying, or disclosing it to anyone else, is strictly prohibited and may be unlawful. Any views, opinions or options presented are solely those of the author and do not necessarily represent those of Arun District Council. The information in this e-mail may be subject to public disclosure under the Freedom of Information Act 2000, therefore we cannot guarantee that we will not provide the whole or part of this e-mail to a third party. The Council reserves the right to monitor e-mails in accordance with relevant legislation. Whilst outgoing e-mails are checked for viruses, we cannot guarantee this e-mail is virus-free or has not been intercepted or changed and we do not accept liability for any damage caused. Any reference to "e-mail" in this disclaimer includes any attachments.



Please Read:

Information in this message is confidential and may be legally privileged. It is intended solely for the person to whom it is addressed. If you are not the intended recipient, please notify the sender and delete the message from your system immediately. It is your responsibility to check this email for viruses and Eastwood & Partners cannot be held responsible for any resulting loss or damage in the event that this message or any attachments contains a virus