

5 June 2014

Brendan Liew
Planning Officer
NSW Department of Planning and Environment
23 Bridge Street
Sydney NSW 2000

Re: Gloucester Gas Project (MP 08-0154 MOD 1) – OEH consultation

Dear Brendan,

This letter confirms that AGL Upstream Infrastructure Investments Pty Ltd (AGL) and the NSW Office of Environment and Heritage (OEH) have discussed OEH's submission on AGL's Gloucester Gas Project modification proposal (MP 08-0154 MOD1). Following receipt of the submission, AGL has engaged with OEH (Ian Jackson and Peter Evans) regarding OEH's requirements to issue consent under section 256 of the WM Act prior to construction of the pipeline.

The OEH submission (dated 11 March 2014) noted that any pipeline construction activities on the Hunter Valley declared floodplain would need to comply with section 256 of the NSW *Water Management Act 2000* (WM Act), specifically relating to any works in the vicinity of the Hunter Valley Flood Mitigation Works scheme assets.

The design of the pipeline and route within the proposed pipeline corridor (subject of the modification) is close to completion, with construction due to commence in 2015. The pipeline construction design engineers at AGL have reviewed OEH's requirements and confirmed that they will be met and incorporated into the design process.

Subject to approval of the proposed modification by the Minister for Planning (or delegate), the design of the pipeline and its location within the modified corridor will be confirmed in the near future. Following this, AGL has committed to providing OEH with the necessary information to satisfy their requirements so that consent under section 256 of the WM Act can be issued and construction can commence.

The above information was provided to OEH in writing by AGL in a letter dated 2 June 2014. A copy of this letter is enclosed. Should you have any questions regarding this letter, please do not hesitate to contact the undersigned on (02) 9493 9506.

Yours sincerely

Duncan Peake
Associate Director
dpeake@emgamm.com

Enc.: AGL letter to OEH (2 June 2014)

Appendix A

Correspondence between AGL and NSW Office of Environment and Heritage

Peter Evans
Senior Team Leader
Water, Floodplains and Coast
Office of Environment and Heritage
117 Bull St
Newcastle NSW 2302

Via Email: peter.evans2@environment.nsw.gov.au

2 June 2014

Dear Peter,

This letter provides a summary of the correspondence between AGL Upstream Infrastructure Investments Pty Ltd (AGL) and the NSW Office of Environment and Heritage (OEH) regarding OEH's submission on AGL's Gloucester Gas Project modification proposal. It also confirms that OEH's requirements for construction of the pipeline within the Hunter Valley Flood Mitigation Works will be met (subject to approval of the modification), and the necessary information will be provided to OEH prior to construction to enable OEH to issue the relevant approval.

Background

A modification application (MP 08-0154 MOD1), supported by an Environmental Assessment (EA), to the Gloucester Gas Project, Project Approval was lodged by AGL to the NSW Department of Planning and Infrastructure (DP&I, now known as the Department of Planning and Environment (DP&E)). The modification application seeks to realign some sections of the pipeline corridor between Gloucester and Hexham. The EA was publically exhibited between 2 and 18 December 2014. A response to submissions document was prepared and lodged with DP&I in February 2014.

The OEH lodged a submission (dated 11 March 2014) on the response to submissions to DP&I noting that any pipeline construction activities on the Hunter Valley declared floodplain would need to comply with section 256 of the NSW *Water Management Act 2000* (WM Act), specifically relating to any works in the vicinity of the Hunter Valley Flood Mitigation Works scheme assets.

Following receipt of the submission, AGL has engaged with OEH (Ian Jackson and Peter Evans) regarding OEH's requirements to issue consent under section 256 of the WM Act prior to construction of the pipeline.

Summary of requirements for section 256 consent

The requirements to issue consent under section 256 of the WM Act were provided by OEH to AGL via email correspondence (14 April 2014, 16 May 2014 and 26 May 2014) and are summarised as follows:

- The pipeline corridor will intersect levees at four locations and may cross the control levee near Greenways Creek:

- OEH requires locations of temporary pits, information on material to be used for sealing around the pipeline and contingency plans to address potential failure of the levee should flooding occur during construction.
- The pipeline corridor crosses a number of channels and runs parallel to channels at Barties Creek and along the water supply line and are close to floodgates at Duckenfield and Tarro.
- OEH requires the depth of the pipeline below the channel invert and assurance that the pipeline can withstand loading from a 30 ton excavator working above it.
- The pipeline corridor is close to areas of previous bank stabilisation at Osterley, Duckenfield and Heatherbrae and drilling may encounter these areas.
- OEH requires confirmation that AGL will be responsible for any additional bank stabilisation works resulting from construction of the pipeline at these locations.



A copy of the email correspondence detailing the above information requirements is enclosed with this letter.

Pipeline design finalisation

The design of the pipeline and route within the proposed pipeline corridor (subject of the modification) is close to completion, with construction due to commence in 2015. The pipeline construction design engineers at AGL have reviewed OEH's requirements and confirmed that they will be met and incorporated into the design process.

Subject to approval of the proposed modification (MP 08-0154 MOD1) by the Minister for Planning (or delegate), the design of the pipeline and its location within the modified corridor will be confirmed in the near future. Following this, AGL will provide OEH with the necessary information to satisfy their requirements so that consent under section 256 of the WM Act can be issued and construction can commence.

Should you have any questions regarding this letter, please do not hesitate to contact Toni Laurie, Land & Approvals Manager, on (02) 6558 1139.

Yours Sincerely,

A handwritten signature in black ink, appearing to read 'Toni Laurie', is positioned below the 'Yours Sincerely,' text.

Toni Laurie
Land and Approvals Manager

Cc: Brendan Liew, Planning Officer, Department of Planning and Environment

Enc.: Email correspondence from OEH (14 April, 16 May and 26 May 2014)

Toni Laurie

From: Ian Jackson [Ian.Jackson@environment.nsw.gov.au]
Sent: Monday, 26 May 2014 9:43 AM
To: Toni Laurie
Cc: Peter Evans
Subject: RE: AGL Gloucester Gas Project Pipeline

Toni

At that depth I tend to agree that it is unlikely you will encounter the rock work, however I cannot provide the actual depth of the rock.

Due to the construction date of the bank protection works it is unclear whether geo-fabric would have been used under the rock to help provide some foundation or whether the rock was contained within gabion baskets or placed loose and allowed to find its own foundation in the soft material.

Since I have been here there have been numerous issues with poor foundation material, in 2001 protection works at a site used 300% more rock than specified before the design was changed to a pile wall and when the piles were driven they didn't encounter any of the rock.

Regards

Ian

Ian Jackson
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From: Toni Laurie [mailto:TLaurie@agl.com.au]
Sent: Thursday, 22 May 2014 1:06 PM
To: Jackson Ian
Cc: Evans Peter - Newcastle
Subject: RE: AGL Gloucester Gas Project Pipeline

Hi Ian,

Just a quick email to confirm the section for the Bank Protection Works - I have copied the details and comments from our engineer below for your review. There is also one further query that they had, and that was to confirm the depth of bank stabilisation structures. We believe it is unlikely we will encounter these structures at our pipe depth, but would like to confirm the depths of these structures to incorporate into our planning and construction design.

Bank Protection Works

KP92 Hunter River HDD2

- This crossing will be by HDD.
- The bank protection works are on the southern bank (FID 35).
- Approximate depth of pipe is 28 metres

- Note river bed is assumed to be approximately 8m underground profile

KP82.8 Hunter River HDD1

- This crossing will be by HDD.
- The bank protection works are on the northern bank (FID 50).
- Approximate depth of pipe is 28 metres
- Note river bed is assumed to be approximately 8m underground profile

Thanks once again for your assistance with these details.

Regards,
Toni

From: Ian Jackson [<mailto:Ian.Jackson@environment.nsw.gov.au>]
Sent: Friday, 16 May 2014 12:26 PM
To: Toni Laurie
Subject: RE: AGL Gloucester Gas Project Pipeline

Toni
Thanks for the details I have provided further comments to the points below in red.

Peter Evans would be the best person to contact about any concerns

Regards,

Ian

Ian Jackson
Floodplain Engineer, Hunter Central Coast
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NSW Department of Premier and Cabinet
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From: Toni Laurie [<mailto:TLaurie@agl.com.au>]
Sent: Wednesday, 14 May 2014 11:58 AM
To: Jackson Ian; Evans Peter - Newcastle
Subject: FW: AGL Gloucester Gas Project Pipeline

Hi Peter and Ian,

AGL's engineers have reviewed the GIS data files and information that you have provided - thank you again for sending these through.

I have copied below the comments from the engineers in relation to each area along our pipeline where the matters have been raised, and the proposed ACTION for your review. There are some unknowns highlighted in yellow under KP 89.9 for which we would like to seek your clarification.

I would like to discuss these with you as our proposal is to provide a report incorporating these comments and actions to the Department of Planning & Infrastructure to address the issues you have raised in the OEH Response to

Submissions for the pipeline modification. Could you please let me know which of you is the best person to call and discuss. Thanks.

KP79 – 82

- Parallel to drainage channel
- We already have an RCR in place to stay back from the channel for stability reasons
- Design intent is to keep the centreline of the pipe a minimum of 20m from the drainage channel
- Note this means construction equipment will be about 10m away from the drainage channel
- ACTION: Maintain 20m offset between pipeline and drainage channel centrelines

KP82.8 Hunter River HDD1

- Approximately 100m from Flood gate 7.130
- ACTION: Add note to alignment sheet that all works must be a minimum 10m from flood gate 7.130

KP86.9 Millers Forest

- Crossing of Section 17 drainage Channel
- Pipeline will be concrete weight coated through here due to inundation
- Heavy wall pipe can be used to resist penetration by a 30T excavator
- ACTION: Change pipe type on alignment sheet to heavy wall 2 pipe lengths either side of this crossing ~70m
- ACTION: Specify increased depth of cover at channel crossing ~1200mm

KP89.9

- Crossing of Section 19 Levee and proximity to flood gate 7.481
- ACTION: Add note to alignment sheet that all works must be a minimum 10m from flood gate 7.481
- ACTION: Add the following notes to the construction specification
 - o the control bank must be re-compacted/reinstated:
 - Using impervious clay road base material in 300mm layers compacted to a minimum of 80% maximum dry density
 - A 65mm to 85mm single layer or sandy loam top soil placed over and turfed
 - o section of pipe through levee bank to be sealed using
 - If levee is to be excavated then same method as above applies otherwise use of bentonite to fill void around pipe if bored
 - o contractor to provide a contingency plan to address potential failure of the levee should a flood occur while works are conducted near the levee and need to include
 - How the contractor proposes to protect the disturbed or adjoining section of levee
 - Should excavation occur barricades will be required, these barricades must be capable of withstanding flood heights and associated water forces 100mm higher than the existing crest level
 - The location of the barricades and any other materials/equipment relative to the excavation site, no further than 50m from work area
 - As OEHL are not directly involved the contact details of the project manager and works supervisor are to be supplied to OEHL's Floodplain Engineer for notification purposes of pending flood
 - o All disturbed areas near the levees are to be returfed following completion of works

KP92 Hunter River HDD2

- Pipe is at sufficient depth to not interfere with levee banks
- Intent is to locate the pipe in rock at these locations
- HDD pit is ~160m away from levee bank
- Crossing drawing is available

Bank Protection Works

- Extensive rock work for bank stabilisation has been conducted at Osterley, Duckenfield and Heatherbrae in the late 70's to early 80's and it is highly likely these will be encountered during drilling.

- I cannot locate these on the GIS layer. Could you please provide.
Our GIS contractor has already contacted you about the layers.

Regards,
Toni



Toni Laurie
Land and Approvals Manager

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From: Ian Jackson [<mailto:Ian.Jackson@environment.nsw.gov.au>]
Sent: Monday, 14 April 2014 11:58 AM
To: Toni Laurie
Cc: Peter Evans; Will Sands
Subject: RE: AGL Gloucester Gas Project Pipeline

Toni

Thanks for the maps, the proposed route will intersect a number of our assets and further information will be required in order to issue a s256 consent.

Levees

The pipeline will intersect our levees on the Hunter River at 4 locations and may cross our control levee near Greenways Creek.

I have no issues with AGL trenching though the control bank provided the excavated material is replaced to the same level of compaction.

However details will be required for:

- Location of temporary pits for the horizontal drilling relative to the levee toe
- Material to be used for sealing around pipe to ensure levee integrity is maintained
- A contingency plan to address potential failure of the levee should a flood occur while works are conducted near the levee

All disturbed areas near the levees are to be returfed following completion of works

Drainage channels and Floodgates

The works will cross a number of our channels and run parallel to the channels at Barties Creek and along the water supply line, the proposal also indicates they will be close to floodgates at Duckenfield (7.130) and Tarro (2.010) both 1.5m dia and two gates on the control bank both 0.6m dia

OEH undertakes maintenance of the channels which involves the removal of vegetation with an excavator and details will be required:

- Identifying the depth of pipe below the channel invert and

- Pipe will be capable of withstanding loading from a 30 ton excavator working above.

Works associated with boring will not be permitted within 10m of the 2 large floodgate outlets and 5m of the 2 small floodgate outlets

Bank protection works

Extensive rock work for bank stabilisation has been conducted at Osterley, Duckenfield and Heatherbrae in the late 70's to early 80's and it is highly likely these will be encountered during drilling.

At present the works are stable but there is a potential these may become unstable once disturbed, should this occur AGL will be responsible for placement of additional rockwork at these locations

I will have our GIS contractor provide shape files for the relevant areas when he returns later this week.

Can you also provide the email details for the works supervisor (and any others you deem necessary) so I can add them to my contact list to provide information should a flood occur during the duration of the work.

If you have any further questions please call me.

Regards

Ian

Ian Jackson
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From: Toni Laurie [<mailto:TLaurie@agl.com.au>]
Sent: Monday, 7 April 2014 11:44 AM
To: Evans Peter - Newcastle
Cc: Jackson Ian
Subject: AGL Gloucester Gas Project Pipeline

Hi Peter,

Thank you for your time last week to discuss the Gloucester Gas Project pipeline modification.

As discussed, in the review of the response to submissions on the Minor Pipeline Corridor realignments (MP 08-0154 MOD1), OEH has raised the requirement for AGL to comply with section 256 of the *Water Management Act 2000*, in specific regard to any of the works for the Hunter Valley Flood Mitigation Scheme that may be within the vicinity of the pipeline alignment.

I have attached 3 maps to this email covering the southern section of the proposed pipeline corridor for the Gloucester Gas Project. As discussed if you could please review the maps and provide information on the 'works' and their location, AGL will be able to incorporate this information into our design and ensure compliance under section 256.

A few notes for you on the pipeline:

- the pipeline is entirely underground with no above ground structures other than the marker signs required to delineate the location of the pipeline (these are generally at fence lines or where there may be a change in direction in the pipeline and always maintain a line of sight to the next marker sign);
- the pipeline will be predominantly trenched and have a minimum depth of cover of 750mm (although it is likely to be more in many areas due to surface constraints);
- The Hunter river is to be Horizontally Directional Drilled (HDD) with the drilling rig to set up on the eastern side of the Pacific Highway at Tomago, exiting on the western side of the river (as noted on the map).

Please don't hesitate to contact me if you require any further information or if the attached maps do not suffice for your review.

Thankyou again for your assistance with this.

Regards,
Toni



Toni Laurie
Land and Approvals Manager

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