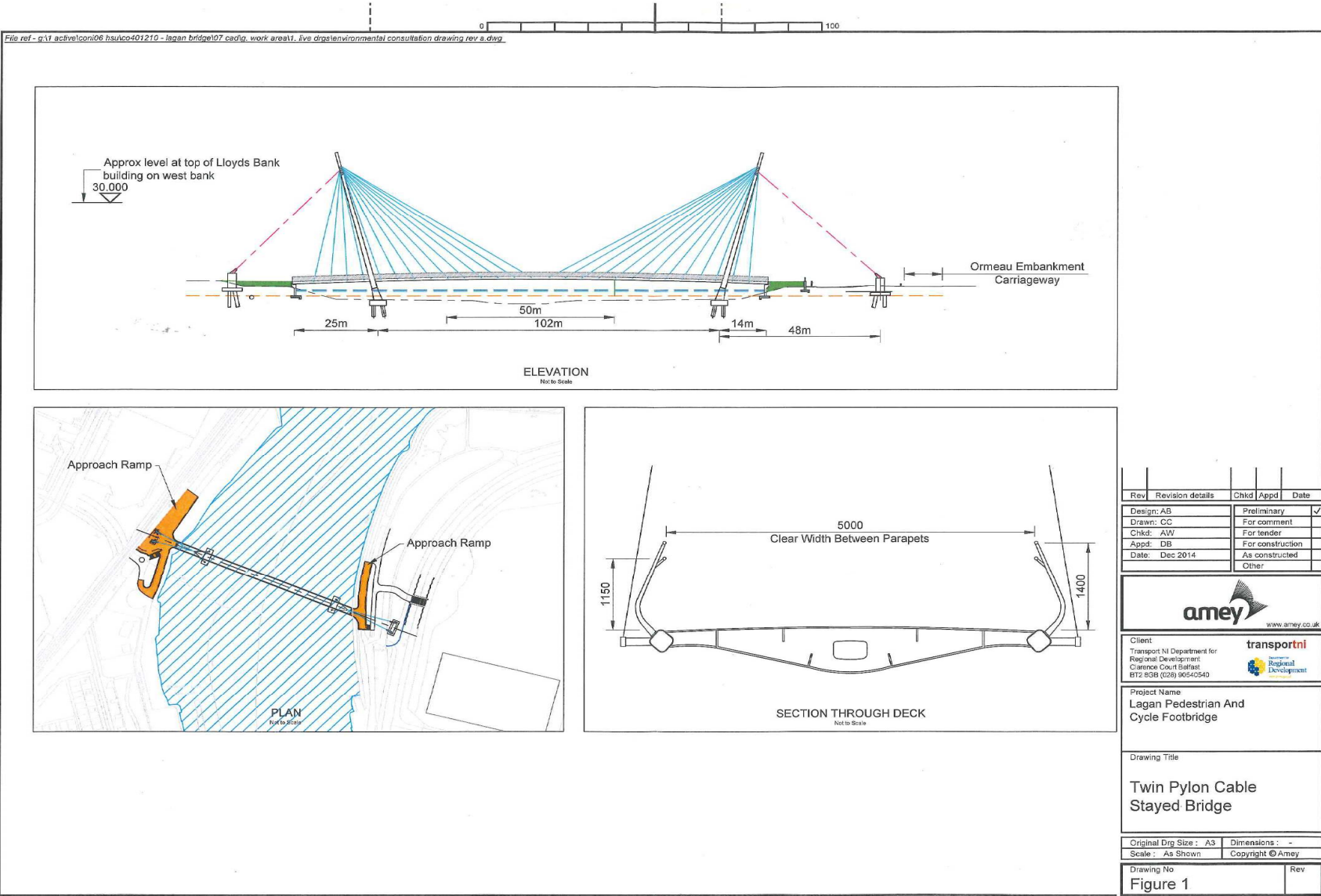


Appendix 1- Lagan Footbridge Layout Drawing



Appendix 2- Draft response to Environmental Impact Assessment for the proposed pedestrian and cycle bridge over the River Lagan, Belfast.

Belfast City Council welcomes the opportunity to comment on the proposed pedestrian and cycle bridge over the River Lagan, Belfast. The Council has a keen interest in this proposal due to its proximity to the Ozone Leisure Centre and Ormeau Park. Whilst the Council is broadly supportive of the proposed development to improve connectivity of the city to surrounding neighbourhoods it is essential to consider any environmental issues arising from the proposed pedestrian and cycle bridge.

It should be noted that the bridge proposal will be located on DSD land at the east and west bank of the river. It is anticipated that this land will be transferred to council ownership as part of the DSD asset transfer in April 2016. The Council will engage with DSD and DRD regarding detailed design and management of these areas.

In the response below some strategic context is outlined before specific comments in relation to the proposal under consideration.

Belfast Metropolitan Area Plan

Within BMAP two new pedestrian/cycle bridge crossings are proposed to serve key activity spines between the east and west sides of the River Lagan. These are proposed to improve the connection between the extension of existing riverside walkways and the more strategic sections of the pedestrian network, whilst facilitating better access to and from the City Centre. The Council welcomed the proposed pedestrian/cycle bridge crossing Gasworks to Ormeau Embankment (Proposal CC 023/02) in relation to improving the connections and accessibility of the city centre.

Belfast City Masterplan

Belfast City Masterplan sets out the strategic objective for an Accessible and Connected City. The masterplan aims to deliver a placemaking solution for the Shaftesbury Link (City Centre Ring Southern Section) which contains the potential for a pedestrian bridge from the Gasworks to Ormeau Park in order to link the residential neighbourhoods to Ormeau Park.

Belfast City Council City Centre Regeneration Strategy and Investment Plan

The draft Belfast City Centre Regeneration Strategy and Investment Plan identified the policy objectives to “Create a green, walkable, cyclable centre” and “Connect to the city around”. These are two of the eight policies outlined in the draft plan.

The objective to “Create a green, walkable, cyclable centre” is to “reduce the area of asphalt and increase green space in the city centre through provision of new open spaces, a comprehensive streetscaping programme and development of the Lagan corridor as a recreational spine.”

The objective to “Connect to the city around” aims to “reduce barriers between the city centre and the communities that surround it by connecting to activity in adjacent neighbourhoods, developing two new pedestrian bridges over the River Lagan and reducing road widths, improving pedestrian crossings, streetscaping key corridors and improving the built form relationship at the edge of the centre.”

Belfast City Council welcomes the proposed development of a pedestrian and cycle bridge over the River Lagan as this will provide increased accessibility to the Ozone Leisure Centre and Ormeau Park. Increased usage of these facilities will enable more people to get more active, more often and help us achieve better health outcomes for the City and local neighbourhoods. The Council

would like accessibility to the park and leisure centre to be considered during the design and construction phase so that there is no negative impact on the public's ability to use these facilities.

From a waste management perspective, the Council would encourage the use of sustainable/recycled material where reasonable practical within the bridge construction. We would also emphasise the importance of managing any waste generated throughout the whole phase (e.g. excavation and construction / building works) appropriately, whilst adhering to all legal requirements (such as Duty of Care). We would encourage the recycling and minimisation of any waste generated on site by the construction workforce (e.g. food scraps, paper, cardboard, plastic and cans). Also, promotion of the waste hierarchy with prevention and reduction of waste as a priority should be considered throughout the whole project.

When consulting on the environmental and biodiversity impacts of the construction and use of the proposed pedestrian and cycle bridge Belfast City Council would request clarification that the Northern Ireland Environment Agency has been consulted as part of this process.

Belfast City Council Environmental Protection Unit had been previously consulted by the DoE at the 'preapplication stage' for the proposed pedestrian/cycle bridge (Z/2014/1060/PREAPP). This Unit's correspondence with Planning, date 3rd Nov 2014 is attached. It refers to two reports which were submitted at preapplication stage, both conducted by Amey:

- "Phase I Land Contamination Report Proposed River Lagan Footbridge Amey PLC" dated September 2014 and referenced CO0401210.
- "Study of Options Environmental Report, Lagan Footbridge, Belfast Road Service" dated August 2014 and referenced CO401123/SOER/v1

In the letter we requested that a Phase II contaminated land risk assessment is submitted which involves an intrusive site investigation of underlying soils/water and possible gas. The Amey Phase I report had concluded that a Phase II was conducted.

In relation to noise impacts from construction works, the August 2014 Amey report refers to noise effects which will be temporary and of short duration. The report highlights the fact that piling operations will affect receptors in the vicinity. What was not referred to in the EPU letter was BCC's construction Advice Notes which gives advice/guidelines to contractors re noise from construction works including piling, noise and vibration. BCC construction advice notes are attached for reference.

ST/GM/300257

Miss R Kerr

Z/2014

Mr Mc Ilwaine
Divisional Planning Manager
The Planning Service
Bedford House
16 - 22 Bedford Street
Belfast
BT2 7FD

Dear Mr Mc Ilwaine

Proposal: Pedestrian and cycle bridge over the River Lagan
Location: Land between Ormeau Gasworks and Ormeau Embankment

In relation to the above planning application, the Environmental Protection Unit of the Health and Environmental Services Department responds as follows.

It is noted that this proposal is for a pedestrian and cycle footbridge over the river lagan.

This Unit previously responded to this application in letter dated 4 September 2014 our reference ST/RW/293743. This Unit is now in receipt of:

- an Amey report titled "Phase I Land Contamination Report Proposed River Lagan Footbridge Amey PLC" dated September 2014 and referenced CO0401210.
- an Amey report titled "Study of Options Environmental Report, Lagan Footbridge, Belfast Road Service" dated August 2014 and referenced CO401123/SOER/v1

Contaminated Land

The September 2014 report has identified a number of potential sources of contamination associated with the historical use of the site and immediate surroundings which comprised of made ground, former gasworks, Vitriol works, contaminated river sediments, road vehicles and abattoir. This submission has determined that the finished site surface is likely to include small areas of soft landscaping as well as hardstanding, so exposure pathways to human health receptors for contaminants and hazardous ground gases/vapours are limited, but viable. The combined human risk to human health (future site users) from contamination is considered to be moderate/low (page 23). It is noted that the report recommends that 'investigation works should comprise of a series of boreholes and trial pits to establish geological and hydrological setting of the footbridge. Sampling and testing of the site soils in the proposed development area would be necessary to establish the nature and extent of contamination' (page 27).

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Consequently, **this Unit therefore requests that the applicant submits a contaminated land risk assessment that addresses these issues in full.** This will require a Quantitative Risk Assessment (often referred to as a Phase II) conducted in accordance with *Model Procedures for the Management of Land Contamination* (CLR11) and must incorporate:

- A detailed site investigation in line with British Standards BS10175:2011. Any ground gas investigations should be conducted in line with BS8485;
- A satisfactory assessment of the risks (including a Revised Conceptual Site Model) associated with any contamination present, conducted in line with current Defra and

- Environment Agency guidance. In addition, risks associated with ground gases should be assessed under the methodology outlined in CIRIA C665;
- Based on the outcome of this risk assessment, a Remediation Strategy (often referred to as a Phase III) may be required. If found to be necessary, this Strategy must demonstrate how the identified pollutant linkages are to be demonstrably broken and no longer pose a potential risk to human health.

Guidance on the production of suitably robust contaminated land risk assessments can be found at:

www.ni-environment.gov.uk/land-home/land-quality/contaminated_land-2/contaminated_land_guidance-2.htm

In order to facilitate the review of the above information, this Unit recommends a submission in an electronic format in addition to the hard copies required by the Planning Service. Failure to provide sufficient compliant and thorough contaminated land risk assessments may result in this Unit being unable to determine that the site is fit for end-use and therefore recommending that planning permission be refused.

On completion of the above, this Unit may then be able to advise Planning Service of any necessary or specific conditions to be attached to any planning permission for the proposed development. In order to demonstrate that any identified remedial measures have been incorporated into the proposed development a Verification Report will be required. This Verification Report must be in accordance with current Environment Agency guidance and demonstrate that the mitigation measures have broken the relevant pollutant linkages and that the site no longer poses a potential risk to human health. Failure to provide a satisfactory Verification Report on completion of the works may lead to the assumption that the site remains a risk to human health and may be subject to further investigation through forthcoming legislation.

In addition, in relation to the contamination on this site this Unit advises Planning Service to seek the views of the Land & Resource Management, Northern Ireland Environment Agency, Klondyke Building, Cromac Avenue, Gasworks Business Park, Ormeau Road, Belfast BT7 2JA

Noise

It is noted that the final design option of the bridge has yet to be finalised. However, it is noted that the construction phase of all the footbridge options will result in noise effects, which will be temporary and of short duration. The August 2014 report states that construction noise will affect receptors in the vicinity of the footbridge, mainly from piling operations. It also states that as it is the scheme is for a footbridge, operational noise is not considered to be an issue and it will not have a significant effect on the ambient noise environment.

Continued.../

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Therefore, this Unit recommends that the following **condition** is attached to any planning permission granted.

Once a preferred option is chosen and the scheme progresses to a detailed design and prior to the commencement of the works, a full construction assessment for noise should be carried out and mitigation measures determined.

Yours sincerely

Roisin Kerr
Senior Environmental Health Officer
Environmental Protection Unit

BELFAST CITY COUNCIL ENVIRONMENTAL PROTECTION UNIT

ADVICE NOTE FOR CONSTRUCTION AND DEMOLITION SITES

This information is intended for contractors, developers, statutory undertakers and others who are undertaking works within the boundary of Belfast City Council.

NOISE CONTROL

Your attention is drawn to the Pollution Control and Local Government (NI) Order 1978 which enables the City Council to impose requirements as to the times during which work may be carried out and the methods of work to be used. These requirements can extend to the following description of work:-

- a) the erection, construction, alteration, repair or maintenance of buildings, structures or roads;
- b) breaking up, opening or boring under any road or adjacent land in connection with the construction, inspection, maintenance or removal of works;
- c) demolition or dredging work; and
- d) any work of engineering construction (whether or not already comprised in paragraphs (a), (b), or (c) above).

Legal Notices

Where noise/vibration cannot be controlled by an informal agreement, or depending on the nature of specific projects, it may be necessary for the Council to serve a legal notice under Article 40 of the Pollution Control and Local Government (NI) Order 1978. This notice is served on the person carrying out/about to carry out the works, (including relevant sub contractors) and it also may be served on those having responsibility and control for the works. Notices may prohibit the use of certain equipment such as breaking tools, specify the hours during which the works may be carried out, and/or stipulate noise and vibration limits. It will also require the adoption of "best practicable means" to minimise noise and vibration as defined in relevant codes of practice. The Council will not hesitate to take legal action against any person contravening the requirements of a legal notice served upon them.

The service of a legal notice by the Council does not prevent residents or the occupants of commercial premises from taking civil action for damages arising from e.g. loss of trade or structural damage.

Methods of Work

In all cases the best practicable means of minimising noise on the site must be adopted. In this respect guidance is given in British Standard, BS 5228: 2009 Code of Practice for Noise Control on Construction and Open Sites.

The following examples are applicable:-

- a) for any particular job, the quietest available plant and/or machinery should be used. Where appropriate, it must be constructed to meet the requirements of E.C. Directives;
- b) all equipment should be maintained in good mechanical order and fitted with the appropriate silencers, mufflers or acoustic covers where applicable;
- c) stationary noise sources should be sited as far away as possible from noise sensitive development, and where necessary acoustic barriers should be used to shield them;
- d) any piling should be carried out by the method causing the minimum of noise or vibration;
- e) any machinery which is in intermittent use should be shut down in intervening periods of non-use or where this is impracticable, it should be throttled back to a minimum;
- f) employees should be informed about the need to minimise noise and should be supervised to ensure compliance with the noise control measures adopted.

NOISE AND VIBRATION CRITERIA

1. Residential Areas

In residential areas or in close proximity to dwelling accommodation, the priority is for residents to be able to sleep at night. Very strict noise controls will be applied to any site which is to operate at night. Periods when people are getting to sleep and just before they wake are particularly sensitive. Site noise expressed as LA(eq) 1 hour at the façade of noise sensitive premises may need to be as low as 40 dB(A) to avoid sleep disturbance. Work should therefore be conducted during the day, but for lengthy projects it is desirable to have some daytime respite e.g. Saturday afternoon, Sundays and Bank Holidays.

Evening work needs special consideration and evening limits are typically set 10dB (A) below daytime limits.

The following limits may be applicable in certain circumstances:-

Noise from construction activities shall -

- a) not exceed 75 dB LAeq, 12 hr between 07.00 hours and 19.00 hours on Mondays to Fridays, or 75 dB LAeq 5 hr between 08.00 hours and 13.00 hours on Saturdays, when measured at any point 1 metre from any facade of any residential accommodation, and
- b) not exceed 65 dB LAeq 1 hr between 19.00 hours and 22.00 hours on Mondays to Fridays, or 13.00 hrs to 22.00 hrs on Saturdays when measured at any point 1 metre from any facade of any residential accommodation, and
- c) not be audible between 22.00 hrs and 07.00 hrs on Mondays to Fridays, 22.00 - 08.00 hrs on Saturdays, or at any time on Sundays, at the boundary of any residential accommodation. (As a guide the total level (ambient plus construction) shall not exceed the pre-construction ambient level by more than 1 dB(A). This will not allow substantial noise producing construction activities but other "quiet" activities may be possible). Routine construction and demolition work which is likely to produce noise sufficient to cause annoyance will not normally be permitted between 22.00 hrs and 07.00 hrs.

2. Commercial Areas

In commercial areas or in close proximity to office accommodation, the priority is for workers not to be subjected to noise at a level which causes speech interference e.g. conversation should not be too difficult with the windows shut. In dealing with complaints it may be necessary for the Council to restrict the hours of operation of noisy equipment such as pneumatic drills, kango hammers and breaking tools. This can be achieved by an informal compromise agreed with the contractor (depending on the nature of the commercial premises, noisy work may be prohibited between 10.00 - 12.00 hrs and 14.00 - 16.00 hrs) or by serving a legal notice where appropriate. It is recognised that for some offices lunch time may be their most busy period, whilst others may be closed.

3. Vibration

Limits on vibration are generally applicable to piling operations only. Human beings are very sensitive to vibration and piling operations are a common source of complaint. Residents are likely to complain when vibration levels are only slightly in excess of perception levels. Sensitivity to vibration varies and peak particle velocities in the range 0.1 - 0.3 mm/s equate to the human threshold of vibration perception at frequencies of 1-80 Hz. Vibrations above these values can startle, cause annoyance or interfere with work activities as well as give rise to concerns over structural damage.

Guidance on the magnitude of vibration and methods of measurement are detailed in BS 5228: Part 2: 2009. The following limits may be applicable in certain circumstances.

Vibration from construction activities shall -

- a) not exceed 2.5 mm/s peak particle velocity, between 08.00 hrs and 19.00 hrs on Mondays to Saturdays, when measured on any ground floor structural surface of any noise sensitive premises, and
- b) not be perceptible between 19.00 hours and 08.00 hours on Mondays to Saturdays or at any time on Sundays, within any residential accommodation.

Note:- imperceptibility generally equates to a peak particle velocity of less than 0.15 mm/s p.p.v.

For the purpose of noise and vibration limits “**noise sensitive premises**” is to be regarded as any residential or office accommodation in the vicinity of the construction works.

It may be beneficial to specify the former noise and vibration limits for inclusion in tender documents together with the following general clause referring to the use of “best practicable means”:-

The contractor shall employ the “best practicable means” as defined in the Pollution Control & Local Government (NI) Order 1978 to minimise noise and vibration resulting from his operations and shall have regard to British Standard BS 5228: 2009 Code of Practice for Noise Control on Construction and Open Sites.

General Advice

The Council recognises that construction operations by their nature are noisy. However the impact on those living and working in the vicinity must be minimised. This is best considered at the tender and design stage.

The maintenance of good community relations is vital. Contractors are advised to consult local residents/communities regarding works and to give them details of a responsible appointed person

on site who will be able to deal with queries. The removal of uncertainty and rumour can help to reduce peoples reaction to noise. Particular regard should be given to the noise impact on hospitals, schools and churches.

This article is intended to provide general advice. If construction noise problems are anticipated or if you have any queries regarding these matters please contact a member of the Environmental Protection Unit who will be pleased to discuss the relevant matters Tel. 028 90270428

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