Appendix A – Analysis of DES-MK 27th June 2018 MCLR Case Closure Letter

Re: The 27th June 2018, EPA/DERM/EHP/DES (DES) department employee Mr Matt Karle (MK) posted to the Mt Coot-tha Local Residents (MCLR) (LR) a signed paper letter (MKL).
The MCLR who have read and considered this letter, strongly disagree with the contents and consider that it contains errors, generalities and omissions.
In our Appendix B document, we expose:

1. The MCLR have worked hard to provide a monitoring response containing extensive data and conclusions which they believe are legally true.
    a. Many of the arguments provided in our Appendix MKL response document, have also been backed up with environmental lawyer advice.
    b. The LR have proven beyond all reasonable doubt, that the BCC MCQ is not adhering to the operational conditions as clearly stated in Schedule-F of its EA, and as provided by DES plus the BCC on several occasions in the past 20 years.
    c. The process of research done and followed up by actual blast vibration monitoring inside the homes, only initiated because the DES advised that it might be a problem,
        i. Plus, our legal advice confirmed that measurement inside private homes was legally valid and complies with the DES Noise Measurement Manual (NMM).
        ii. Liaison with professional Australian building vibration measurement organisations provided guidance.
        iii. They also advised that building vibration amplification measurements are a common and well-defined process, both here in Australia and overseas.
    d. We have also liaised with other lawyers who advised:
        i. The monitoring we are doing is a clear Schedule F legal requirement.
        ii. We have correctly followed the EHP/DES Noise Monitoring Manual (NMM), whilst the BCC MCQ has not.
    e. Hence the LR believe that they have proven beyond reasonable doubt that the BCC MCQ is not complying with the conditions of their EA Schedule F and/or the NMM:
        i. The Schedule F conditions are clearly stated in plain English, however it appears that the DES is distorting these facts by applying their own policy, to override the conditions.
            - Both the DERM/EHP/DES and the BCC have provided the Schedule F conditions to the LR on many occasions (presumably for the LR to read and believe).
        ii. We are advised that the BCC was the original author of these MCQ conditions,
            - The BCC wrote these schedule F conditions for themselves and which EPA/DERM/EHP/DES chose to directly import into the MCQ EA c1997.
            - We can only assume that the conditions were written for the protection of the local residents and hence they should all be respected and never avoided.
        iii. In scientific and engineering terms, the MCQ is not complying with Schedule F:
            - The noise that is heard inside the local homes is not the overpressure blast sonic boom (which has a longer and slower path and is barely heard inside the homes).
                - The DES vibration monitoring has only ever considered the maximum amplitude and ignored the relative propagation delay, timing and phase relationships.
            - On some occasions the MCQ is also not complying with Schedule F3 because this noise exceeds 55dB(A).

- The MCQ is not complying with Schedule F6 because of this location reference "as measured within one metre of any residential boundary or in or on any noise sensitive place",
  - The DES defines a private dwelling (home) as their primary noise sensitive location.
  - The LR achieved a series of scientifically valid private home blast vibration measurements using standard equipment, resulting in an overall minimal X-Y variance and an astonishing 2.5X upsize factor, as somewhat predicted by the Seismology Research Centre Data.
- The MCQ is not complying with the NMM because their manager (Mr Bell) advises the Heilig Technician (Nathan Russell) that he must use a soil spike.
  - DES employee Ms Puschmann advises that this is not compliant with the DES NMM Concrete Block monitoring method.
  - Hence all BCC MCQ Soil Spike monitoring results are non-compliant.

2. The MKL recommends that we refer to the Ombudsman's office:
   a. This is totally the wrong thing to do and is wasting the ombudsman's limited resources.
   b. The LR have in fact been liaising with the QLD Ombudsman since 2017, when a case reference number was originally assigned to us.
      i. The LR are currently proceeding as advised and supervised by the Ombudsman's investigations section.
      ii. The Ombudsman waits for your professional response to all our claims.
   c. The Ombudsman's role is to maintain fairness.
      i. It is not their job to enforce the MCQ EA Schedule F compliance, that is your department's job.
      ii. When statements or accusations are made to or from State or Local Government, the Ombudsman expects responses which are truthful, exact, honest, relevant, professional, legal and informative.
      iii. The current situation where any piece of totally incorrect information is written down by either your department or the BCC and used as a smokescreen, is totally dishonest and unprofessional.

3. The MKL also refers to AS2187.2 2006, which was indeed a useful standard, it is well known that because of its age it is scheduled for redaction this year.
   a. The DES knows that the blast vibration monitoring contained in AS2187.2 Appendix J (Appendix J), is only advisory and non-compulsory (it is not in itself any standard).
   b. Appendix J imported some very old "experimental" data from the 1995 BS7385 standard, (possibly stored on some floppy disk or tape cartridge).
      i. If the DES continues to places a strong value on the imported BS7385 data, then they should also accept the limitations of fragile and very old data plus the reduced scope.
         - BS7385 is an unsubstantiated, experimental example data from an unknown country.
         - It states that all indirect effects on buildings, internal components and local residents (people like ourselves) are not considered.
         - To suggest that this standard somehow defines what will happen in Mt Coot-tha homes is impossible.
      ii. The DES should also concede that the Local Residents have proved beyond doubt that the levels experienced inside the LR homes, is many times the recommended maximums as defined in BS7385.

iii. For freshly poured concrete the limits are well known to be much lower (an approximate 7-day rule exists), whilst this is a problem for new Mt Coot-tha homes, it is totally ignored in the standards and by the DES and BCC MCQ.

c. The MKL seems to be considering that Appendix J is actually part of the proper main standard (which it is not).
   i. The DES should know that Industry.gov.au states that Australia has no standard at all which states the limits for damage from blast vibrations to Australian homes or buildings.
   ii. They also know that both the Appendix J (as well as the DES NMM) recommends against using a Soil Spike (or tent peg) transducer mounting, but this does not deter its common usage.

d. The DES also knows that the residents made 3 Standards Australia Appendix J Amendment Project proposals to get Appendix J changed and was advised by SA that this failed because the QLD EHP/DES specifically opposed it.
   i. We simply asked that "It be non-compulsory that some consideration be given to: Historic Buildings, Electronic Equipment, Blast Counts > 50, Blast Vibration Amplification with Height".
   ii. Also change Human Comfort to Human Health.
   iii. By opposing these somewhat anaemic proposed conditions, the DES is taking the position that they should never be considered (they can never be relevant).
   iv. This view is not supported in BS7385, it is also clearly invalid and/or untrue.

e. The DES knows that our proposed changes to Appendix J were approved by some of the primary Australian construction, certification & asset management organisations:
   i. The Institute of Engineers Australia, plus the Institute of Architects, and the Catholic Church Asset Management Division (includes Stuartholme).
   ii. Some of our arguments were:
      - The way that Australian homes are built and the electronic and data components inside them has changed hugely since 1995, when the floppy disks were the world's mobile data storage system.
      - Almost none of the common construction products and qualities used in 1995 are ever used today.
      - Many homes have mechanical terabyte hard drives and electrical personal lifting equipment (lifts and stair risers), which have almost zero external vibration tolerance.

f. Whilst there are some other overseas studies such as the USBM which tend to quote tests done on buildings, but provides exclusions for Fatigue and Rock Footing styles:
   i. Yes, these do have excellent validity, but only as an example of those exact same buildings, types of wood or steel framing, construction techniques, fatigue levels and supporting geology.
   ii. Hence, they are only example results which are valid for those tests on that particular building using standards, materials, substrates, climate, seismology and geology for that city, state and country.
   iii. In Australia there is a large variation with just the footing geology: rock, clay, sand, frozen ground, marsh, etc.
      - The bespoke designs and variability between Australian homes is high.
      - From North to South and East to West the designs, weather, techniques, materials and standards differ greatly.
   iv. Even to measure blast vibration damage on one home at Mt Coot-tha and claim that this somehow applies to every other home at Mt Coot-tha, could not be scientifically and legally supported.

- In Mt Coot-tha there is a variety of bespoke homes, designs, heights, substrate, footings, concrete or stump heights & strengths. They are all very different.
- Plus, in Mt Coot-tha there is also a 100-year variation in building age, technology and style.
- It is almost impossible to scientifically claim that overseas tests blindly apply to every building in Australia.
- At Mt Coot-tha there exist a huge difference between homes on stumps and those on slabs and again those founded on bedrock.

iv. We note that DES is now responsible for Asbestos.
- We wish to advise have seen some Asbestos Fibre board homes in Mt Coot-tha.
- We strongly believe that the unmeasured renegade internal blast vibrations will be causing asbestos fibres to be released inside the home living areas.

g. Conclusion: The MKL is absolutely wrong to suggest that AS2187.2 2006 (the actual standard) is either a scientifically or legally valid example of private home damage resistance at Mt Coot-tha.

v. The DES previously stated in November 2016, that extended blast counts, plus the effects on multi-level buildings were worthy of consideration for AS2187.2 Appendix J.

vi. Their own QLD Departmental Vibration limits, as well as those in NSW and Victoria, specify a maximum of 5mm/second (9 of 10) and an absolute maximum of 10mm/second.
- This alone conflicts with their more recent opinion of the much stronger levels imported from BS7385 into AS2187.2 2006 Appendix J being satisfactory.

vii. The DES is also not qualified to measure or assess the levels of personal disruption and fear caused by the strong renegade blasting, which the MKL claims can be rated simply as comfort instead of any mental health consequence.
- Whilst the blasting industry defines maximum limits for blast vibration which are classed as human comfort, when the total count and repetition rates increase hundreds of times beyond what is defined in the Australian Standards, this will undoubtedly result in deterioration of Human Physical and Mental Health.
  - Some residents have described the stronger blast as being like a bomb going off, whilst others describe it as an earthquake.
  - Indeed, this is not unlike any other ordinance explosion where high explosive counts and repetition rates causes severe health problems.
  - The effect is much worse when a local resident's home is affected and worse again when the occupant is a child or pensioner.
- An increased anxiety is created just before a blast is done, because the Local Residents are never advised of the planned blast strength.
  - When the MCQ has no defined limit on every 10th blast, and the blast vibration effects inside private homes have previously been several times the state maximum, this is a possible cause of major mental health issues.

viii. The DES is not qualified to define or rule on any minimum levels of blasting below which will cause damage to private property (Appendix-J or other).
- How does the MKL determine that damage may in some homes or contents will never happen at levels even below their supposed human comfort level.

Computer data storage is but one example, high machine-gun style repetition from staggered blasts is another.

- The DES should simply seek to maintain the levels as clearly specified in the MCQ EA Schedule F, which we are advised were originally written by the BCC for themselves.
  - It is logical to derive that the conditions were defined by the BCC, for the protection of the innocent local residents and for valid reasons.
- Failure to enforce the clear and unambiguous text of BCC's self-defined blasting conditions can never be an Impartial Departmental policy.
- Operations, which the EHP/DES director Andrew Connor committed to at the LR 2016 Steven Miles office meeting and afterwards in writing are left unfinished.
  - The LR have repeatedly been sent copies of the MCQ EA Schedule F by EHP/Des and BCC.
  - Hence the LR are fully entitled to believe that the text as provided will be adhered to by the MCQ and enforced by the DES.

ix. Fundamentally: We believe that the DES staff personally would not tolerate regularly repeated blast vibrations as high as 30mm/second inside their own homes,
  - especially when the EA Schedule F does not define any effective upper limit
  - and the blasts before November 2011 were 3 times stronger.

4. The MKL refers to the blast vibration monitoring done at 3 Sir Samuel Griffith Drv (3SSGD) and advises that it is not consistent with (any) recognised methods.
   a. In carrying out the blast vibration monitoring by the residents a standard published procedure was established and published, which when practicable was witnessed by a non-local resident.
      i. In compliance with the EHP/DES Noise Monitoring Manual.
      ii. The detailed graphical output provided by the Instantel Minimate makes it virtually impossible to create false readings with a low variability at exactly the correct time and with similar waveforms to the BCC Measurements.
      iii. For mist blasts, there was deliberately no person remaining inside the house and the best practice was to wait at the Mt Coot-tha Rd monitoring point where the Heilig Technician (Nathan Russell) is located.
      iv. Hence the LR believe that their published procedure is sufficient and advise that the same low variance would be duplicated, regardless of who was in attendance or which calibrated Minimate monitor was used.
   b. The 3SSGD blast monitoring location which the MKL refers to, was one of two chosen monitoring locations.
      i. 3SSGD was mainly used because this is the property which has the same defined address as the current MCQ permanent monitoring point.
      ii. It was essential that the LR monitor is at exactly the same street address (3SSGD), to enable valid blast vibration comparisons and extrapolations.
      iii. The LR also did tests on a Civil/Mining engineer's new home just below Birdwood Tce after the (Civil/Mining Engineer) resident reported concrete cracks in their very new home appearing after a strong 2018 blast.
      iv. The monitoring was done for the benefit of all LR and the results from 3SSGD clearly show that the blast vibrations are approximately 2.5 times as stronger inside the homes.

c. It is well known that the ground vibrations under a common 10-level building can expect to cause amplified vibrations by a factor of 4X times, actually inside the same building. (The 3SSGD home is four levels, plus there are many higher and similar homes at Mt Coot-tha).
   i. There are at least 2 Australian Companies who specialise in measuring vibrations measured in mm/second in or on Homes and buildings (SRC and Resonant Systems). Many others do this on occasions.
   ii. A standard procedure for attaching the transducer is used.
   iii. When it is not permissible to drill a hole into a home or smear a floor area with epoxy, I am advised that the monitoring method where the transducer clamped to a horizontal surface provides adequate coupling and is commonly used.
   iv. We are advised by SRC and Resonant Systems, that this same style of building vibration monitoring procedure is done every year in Australia hundreds of times and world-wide thousands of times.

d. In some areas of the DES or BCC, there seems to be the consideration that if a home vibrates from strong blast vibrations, that this is the fault of the (new or old) home.
   i. However, a possible legal precedent is set by motor vehicle collisions, whereby an innocent passenger is considered as a sensitive receptor of the collision vibrations and forces.
   ii. If a motor car driver acts illegally and collides his car into another innocent or legally parked car:
      - A Cause and Effect situation is defined.
      - The damage to the vehicle plus any private passengers is considered to be the fault of the illegal offender.
      - There is not somehow a fault consideration that the passenger or resident was less rugged, was pregnant, was old, was child, etc.
      - Both private residents and private passengers appear to be innocent victims in these situations, the vehicles and homes are simply containers.

e. Conclusion: A private home is a sensitive receptor and the blast vibrations are primarily the fault of the person and/or organisation doing the blasting.
   i. The procedure for attaching a certified tri-axial Geophone to a building, for the purpose of measuring the sensitive receptor response, is widely used and considered valid (there is simply no other way).
      - The objective at 3SSGD was simply to achieve a comparitive measurement, using the same industry standard geophone instrumentation.
   ii. The EHP/DES, BCC or MCQ has never once measured vibration or noise inside a local resident's home, even though the BCC has been asked by several LR people.
   iii. In relation to assertations that the LR monitoring procedure is somehow non-standard or inaccurate:
      - Please note: The current MCQ EA Schedule F6 conditions does not define any maximum blast vibrations on every 10th blast. This is what is grossly non-standard and totally "inconsistent with every recognised method in Australia".
      - Hence the MCQ could do 9 small quick blasts within a few days, followed by a massive blast registering as much as 50mm/second inside the LR private homes.
      - They could repeat this process every one or two weeks and still be within the terms of the currently defined EA limits.

- Indeed, the LR believe that similar strong blasts were happening inside the LR homes regularly before they were forced to intervene in November 2011 around blast 600.
- The LR fail to see how this absurd situation, could ever be defined in the MKL as a mere personal comfort situation, when the LR have been forced to allocate thousands of dollars and hours of their time in a desperate attempt to intervene, for the purpose of protecting their own homes and mental health.

iv. The ground vibrations travel into the receptive resonant systems causing amplification, and the LR are advised that they are still considered as vibration energy from the ground or "ground vibrations".

- Similar to the road accident example above, the crash damage concept does not stop at the vehicle outer panels and internal damage is not the fault of the approved panel.

5. The MKL advises that our LR case file has been closed.
    a. This puts the LR in a seriously difficult position with nowhere to turn.
    b. The BCC and MCQ totally ignores all our attempts for correspondence and mediation.
    c. The BCC LM Quirk and Cr Matic ignored our complaints and photographic evidence of damage presented by LR at the Council Listens Forum.
    d. Now the DES is refusing to liaise further with the LR and ignored our data.
    e. Conclusion: The way that the QLD DES has treated the LR for the past 20 years and used their departmental policy to override the LR and shield BCC MCQ by denying the clear English Schedule F conditions is plainly wrong.
        i. It violates the concepts of empathy and decency values which are common in Brisbane households.
        ii. The protective conditions of the original BCC MCQ Schedule F were defined for the LR and their precious homes, hence they should not be ignored or overridden.

Finally:
The LR submit that they have done their best to ensure that the text and concepts in this response document are entirely truthful.
The LR therefore insist that the DES convey to the BCC the clear examples of their non-compliance and the need for further community consultation (mediation) as required by Andrew Connor in 2016 & 2017.

6. Many of the arguments provided above have also been backed up with environmental lawyer advice.
7. The process of research followed by actual blast vibration monitoring inside the homes, only proceeded because the DES advised that it might be a problem, plus our legal advice confirmed that measurement inside private homes was legally valid and complies with the DES noise measurement manual.
8. Before beginning home design and construction, the LR were provided with a signed letter from BCC Chris Lange which provided an assurance that the blasting levels at MCQ were far lower than what could ever damage a private home.
    a. In consideration of the fact that the blast vibrations at the closest homes were unknown to DES, BCC and MCQ staff until blast 600:
        i. After considerable amounts of LR work, an approximate 3X upsize misreporting factor was discovered.
        ii. When monitoring inside private homes a further 2.5X upsize factor was discovered.
        iii. This creates a possible compound blast vibration misreporting factor of some 750%.

   b. The assurance and maximum values provided by BCC Chris Lange and other MCQ management staff directly to the LR was grossly invalid and incorrect, and possibly illegal.
9. Conclusion: The LR simply want to get on with their lives like ordinary happy people.
   a. The MKL is but one of many examples why they have been forced to provide their own self-funded activities and massive blocks of their precious time.
   b. This could all have been avoided if only the residents were able to effectively liaise with Cr Matic or LM Quirk, but this failed because the DES compliance policy provided a firewall for the BCC against the LR.

The LR never wanted to be fearful of the quarry blasts or wanted to spend their precious time and money defending their homes, plus they never wanted to contact Standards Australia and run 3 Change Project Proposals and several RTI requests.

- The LR have a very important job to do and that is to look after their health instead of battling to protect their homes for the past 20 years.
- Not since the era of Cr Judy Magub, have the LR ever been able to talk respectfully and constructively with the BCC.

Yours Sincerely,

Philip Best and all the Mt Coot-tha Local Residents (LR)*.
Chairman and Engineer, Mt Coot-tha Local Residents.

** The Mt Coot-tha Local Residents comprises the occupants in the approximately 80 homes bound to the north by Birdwood Tce.*
Some of which attended the 2016 Residents Meeting at Steven Miles office.
Every email recipient was either previously approved by the late John Higgins or specifically interviewed by Philip Best.