Memo

SUBJECT
CSIE Arboricultural Impact Assessment

TO
Rebecca Clutten

DATE
18/02/22

DEPARTMENT
Ecology (Environmental Planning)

PROJECT NUMBER
10046651

COPIES TO
Andy Barnes, Jason Hura, Oliver Cannon, Brandon Murray, Martina Girvan

FROM
James Potts

Dear Rebecca,

Please see responses below to your questions in relation to trees detailed in the CSIE Public Inquiry.

Key questions in relation to trees:

CCiC Position Statement:

"[30] Do you agree that "when it becomes clear that root protection areas cannot be fully respected additional information on individual trees becomes necessary to allow full assessment of the extent of impact on any group"? If yes, can we provide this? If not, why not?"

It is noted that "the Council's tree officer has advised that the tree constraints information, which was prepared to inform the design team, is acceptable". The survey was undertaken by James Potts BSc (Hons) (Arboriculture) MArborA. The information provided is in line with BS5837: 2012 and accepted industry standards for a document of this type.

The TWAO includes a request for deemed outline planning permission. Further design work will be necessary to discharge the reserved matters. The County Council has proposed a condition requiring submission of an AIA, this would enable the submission of additional more detailed information on the impacts of proposals on existing trees to allow full assessment should it become "clear that the root protection areas cannot be fully respected".

More detailed information on the impacts of proposals on existing trees would be provided at GRIP5 detailed design stage when tree stem locations will be available from the topographic survey data. Dedicated mitigation would be provided in the form of an Arboricultural Method Statement (AMS) as is the BS5837:2012 process to ensure the protection of trees to be retained.

The information provided is comparable with other TWAO applications for example:

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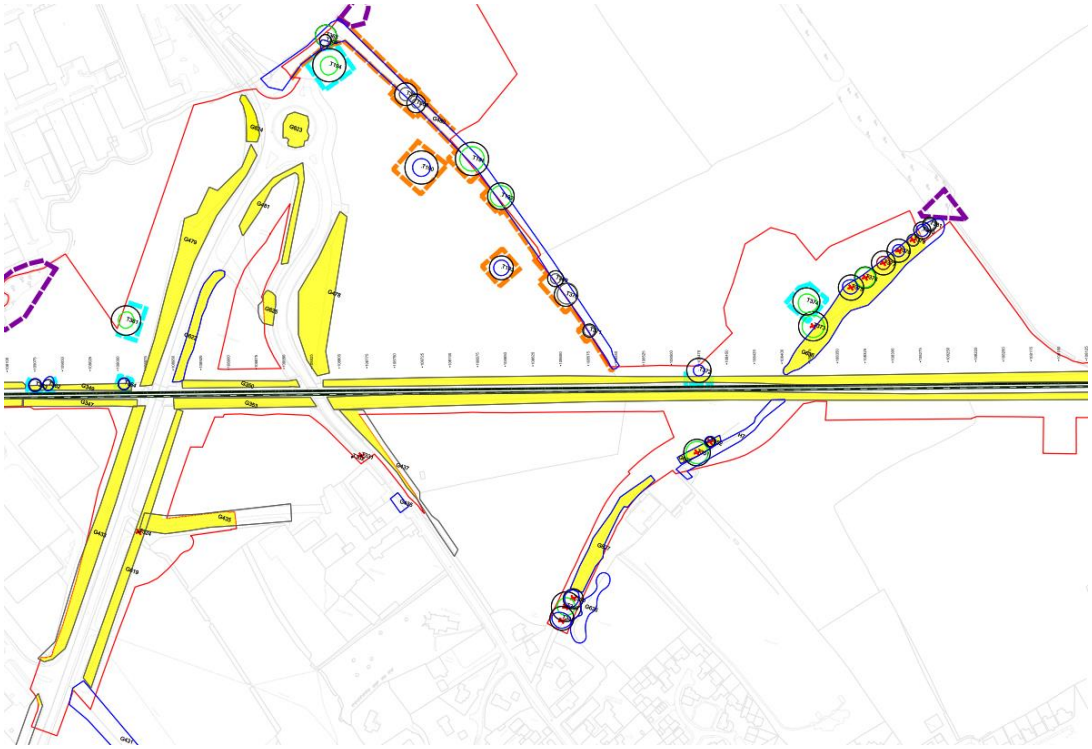
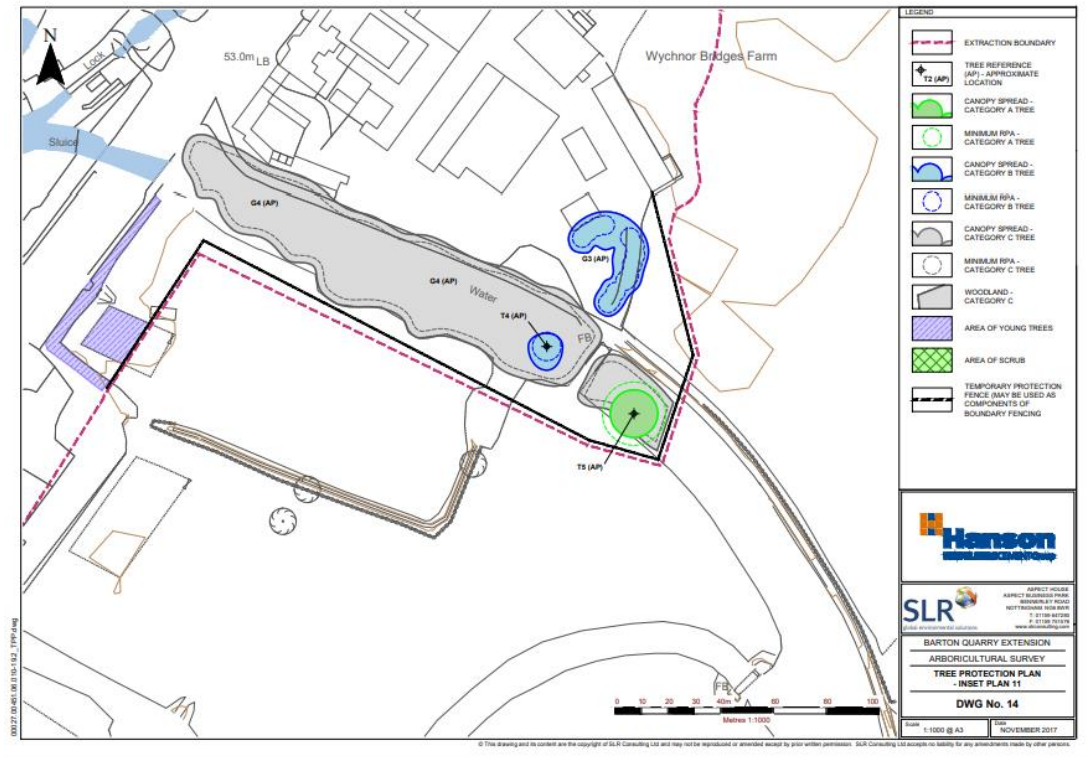
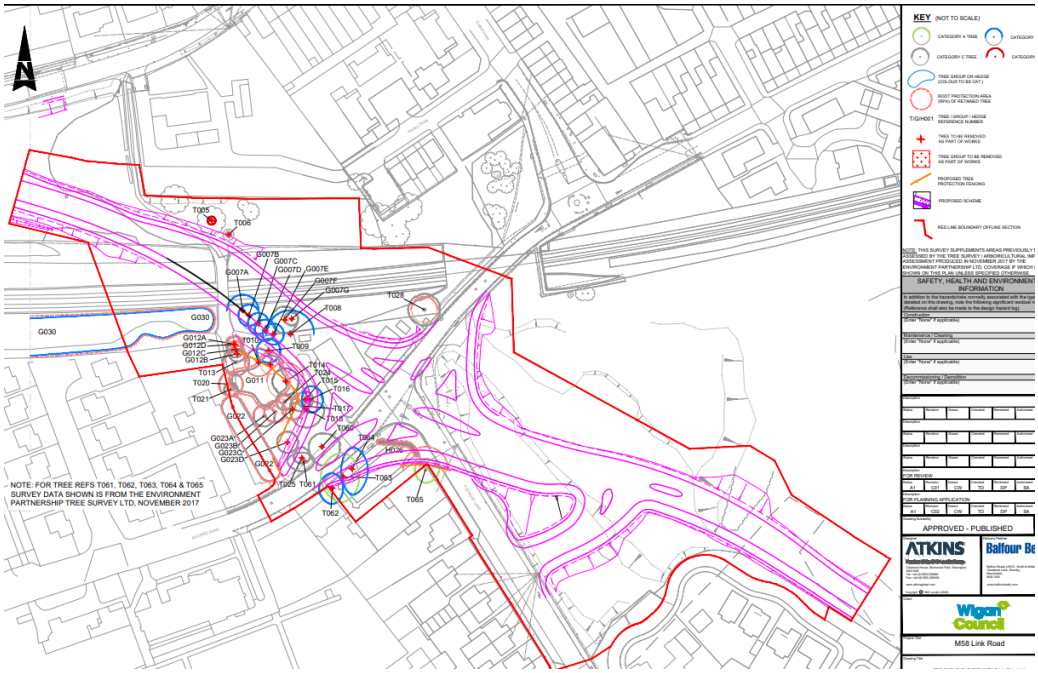
East West Rail Compound A2 (EWR Alliance)



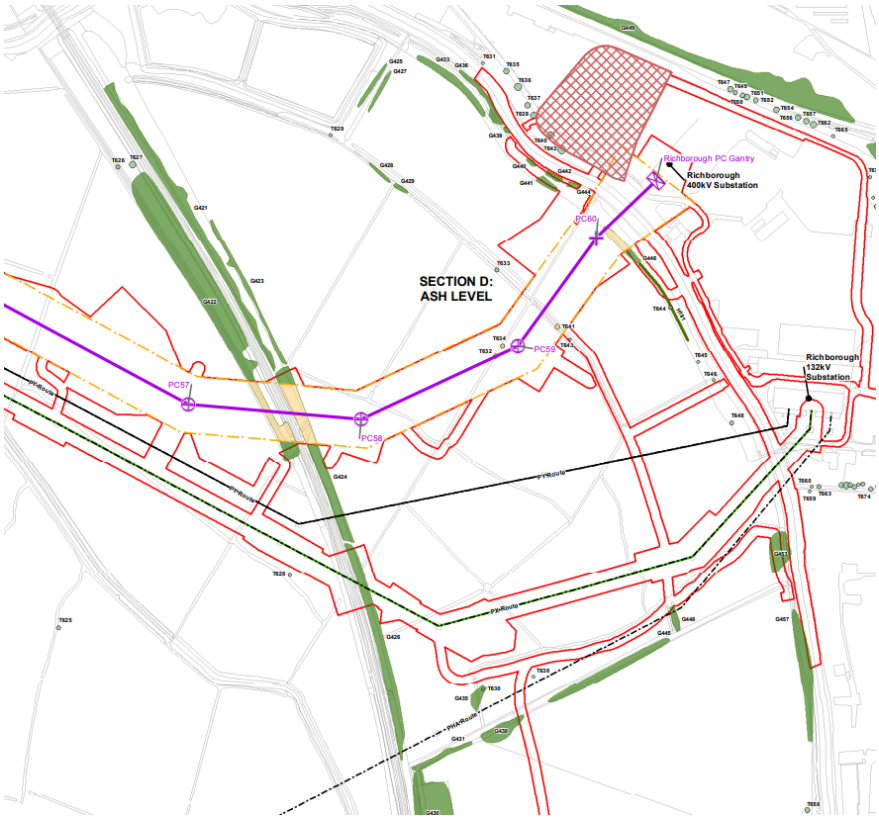
Hanson Barton Quarry (SLR Consulting) for Hanson



M58 Link Road (Atkins) – Wigan Council



Richborough Connection (TEP) for Network Rail



"[31] Do you agree that the impact on canopy loss may be inaccurate as a result of:

- the uneven spacing of trees within the group

- the fact the canopy size of individual trees may differ`

- the fact that trees too close to the development area (but not within it) may not be able to be retained?

Please provide reasons for your views."

The submitted AIA is in line with the BS5837:2012 industry standard and comparable surveys for a range of infrastructure projects. The level of accuracy is appropriate for this design stage. It provides sufficient levels of detail to enable the identification of areas where trees are likely to be impacted by proposals. Group canopy mapping is based on aerial imagery available at the time of the survey and is therefore considered to represent a best estimate of the area impacted by proposed land take.

Network Rail's planning witness Mr Pearson noted 'The spacing along this western line [adjacent to the railway line] seems to be quite sporadic'. It is agreed that there may be some variation in the spacing and canopy spread of trees within the group, this is applicable to all groups of trees surveyed to BS5837 standard on projects.

The submitted AIA has taken a standard, accepted approach to impact assessment and presented the risk to existing trees accordingly. There is potential for impacts from works to be greater or lesser than those presented in the AIA, these are inherent across all projects/assessments of this type.

Land use and construction proposals will be further refined at GRIP5 detailed design stage. Tree stem locations will be available from topographic survey data. A more detailed AIA would be submitted to discharge the requirements of the matters reserved by condition.

"[31] Do you agree that the assessment of the extent of canopy loss is of limited use for assessing the impact on the trees, and that individual trees therefore require assessment? If not, why not?"

Assessment of the loss of canopy cover within the group is appropriate for the design stage. The submitted AIA is in line with the BS5837:2012 industry standard and comparable surveys for a range of infrastructure projects. The level of accuracy is appropriate for this design stage. It provides sufficient levels of detail to enable the identification of areas where trees are likely to be impacted by proposals.

The feature in question was assessed as a 'group' under the BS5837:2012 framework which does not require the identification of individual trees/stems within. Under this framework the group of trees should be considered as such any impacts to it assessed accordingly.

A further AIA and AMS will be completed at GRIP5 detailed design stage with the aid of a full topographic survey and would be submitted to discharge the requirements of the proposed reserved matters conditions.

"[32] Do you agree that the removal of the best quality trees in the group is likely? What is the worst case scenario?"

The group in its entirety was assessed as a Category A arboricultural feature, the highest possible grading under the BS5837 framework. It is likely that the trees within the western boundary of the group are the highest quality specimens in the group, however all trees in the group are graded Category A and therefore the potential loss identified represents the 'worst case scenario'.

A further AIA and AMS will be completed at GRIP5 detailed design stage with the aid of a full topographic survey and would be submitted to discharge the requirements of the proposed reserved matters conditions.

"[33] What are your views on the Council's concerns about wind damage to co-dependent trees? Do you agree that there is likely to be indirect loss of trees as a result of this? If not, why not?"

The submitted AIA is in line with the BS5837:2012 industry standard and comparable surveys for a range of infrastructure projects. The level of accuracy is appropriate for this design stage. It provides sufficient levels of detail to enable the identification of areas where trees are likely to be impacted by proposals. Removal of trees from the edges of groups or woodland stands can carry with it an increased risk of windthrow to trees on the newly exposed edge of a stand, however it would be inappropriate to make predictions as to the extent of this risk at the current level of design/site detail available. Further assessment of the potential impact of wind loading at later design stages will be carried out to confirm the extent of this risk and establish appropriate mitigation measures which could include arboricultural interventions such as crown reduction and complementary 'edge planting'. Further assessment will be undertaken at GRIP5 detailed design stage informed by topographic survey, which would confirm the detailed extents of the proposed impact in this area. It is anticipated that a further AIA and AMS would be submitted for approval to discharge the reserved matters.

"[35] Do you agree that until a further detailed AIA is prepared, the impact on trees cannot be properly assessed?"

The submitted AIA is in line with the BS5837:2012 industry standard and comparable surveys for a range of infrastructure projects. The level of accuracy is appropriate for this design stage. It provides sufficient levels of detail to enable the identification of areas where trees are likely to be impacted by proposals and to support an application for TWAO and request for outline planning permission. There is potential for impacts from works to be greater or lesser than those presented in the submitted AIA, these are inherent across all projects/assessments of this type at this design stage. Further assessment will be undertaken at GRIP5 detailed design stage informed by topographic survey, which would confirm the detailed extents of the proposed impact in this area. It is anticipated that a further AIA and AMS would be submitted for approval to discharge the reserved matters.

Additional points arising from Joanne Davies' evidence"

"JD supplemented [32] of the Position Statement by saying:

- *It would appear that better quality trees are those that receive greatest light from west and those are dominant canopy within group; is those trees that would be lost*
- *Remaining canopy cover not of equal quality*
- *Loss of half may have greater impact as remaining trees may be lower value in terms of quality – that is health, vigour, and canopy size and benefit that has in terms of climate change, pollution etc*

What are your views on this, with reasons?"

Further to response to Q32

The loss of these trees has already been attributed as the greatest possible impact from the perspective of the framework under which they have been assessed in the submitted AIA.

The group in its entirety was assessed as a Category A arboricultural feature, the highest possible grading under the BS5837 framework. It is likely that the trees within the western boundary of the group are the highest quality specimens in the group, however all trees in the group are graded Category A and therefore the potential loss identified represents the 'worst case scenario'.

Further assessment will be undertaken at GRIP5 detailed design stage informed by topographic survey, which

would confirm the detailed extents of the proposed impact in this area. It is anticipated that AIA would be submitted for approval to discharge the reserved matters.

"Re G151 on Sheet 5, JD suggested that the worst case scenario is that "Would only be left with thin line of trees rather than half woodland belt on plan" – do you agree this is a risk? If not, why not?"

Further to comments on the appropriate level of assessment at this design stage, the assessment of the impact on the group was based on canopy area defined by aerial imagery available at the time of the survey and is considered to represent a best estimate of the area impacted by proposed land take. There is potential for impacts from works to be greater or lesser than those presented in the submitted AIA, these are inherent across all projects/assessments of this type at this design stage.

Further assessment at GRIP5 detailed design stage will be carried out to enable discharge of the reserved matters. This will confirm the detailed extents of the proposed impact in this area and inform the design of appropriate mitigation measures to protect the trees. Considering that land use / works proposals will be further refined at this stage, and that tree stem locations will be available from the topographic survey data, final impacts to trees in the detailed AIA also have the potential to be reduced from those presented at in the current design stage. Dedicated mitigation would also be detailed in the AMS to be provided post detailed design to protect trees to be retained.

"Re - G151 'RPA incursion'

- *JD's understanding is that this is caused by a pedestrian access – not clear if it is temporary or permanent pedestrian access. What is the position?"*

  Our understanding is that temporary pedestrian access in the area is required during construction and that RPA impacts in the area can be mitigated.

- *"She suggest lack of detail in tree constraints plan including no detailed layout means it is difficult to assess the impact the pedestrian access would have on existing trees including works to canopy or engineering works that are required to create safe usable access inc excavation"*

  The submitted AIA is in line with the BS5837:2012 industry standard and comparable surveys for a range of infrastructure projects. The level of accuracy is appropriate for this design stage. It provides sufficient levels of detail to enable the identification of areas where trees are likely to be impacted by proposals and to support an application for TWAO and request for outline planning permission.

  The submitted AIA considers the largest potential RPA incursion and therefore presents a precautionary 'worst case' scenario of the area impacted. Based on our experience of similar projects, the team is confident that a solution mitigating RPA impacts can be successfully implemented, and therefore the presented RPA incursion is precautionary.

  Further assessment will be undertaken at GRIP5 detailed design stage informed by topographic survey, which would confirm the detailed extents of the proposed impact in this area. It is anticipated that AIA would be submitted for approval to discharge the reserved matters. A dedicated Arboricultural Method Statement will expand on the detailed mitigation required for the protection of retained trees.

- *"Is any excavation proposed or likely?#"*
  It is understood that as the design stands some excavation into the RPA may be required, however it is the intention of the project team to minimise the need for these excavations and/or mitigate their impacts through an engineered solution.

- *"Are we able to satisfy her that pedestrian access can be provided without material damage to trees resulting in their loss?"*

  A precautionary assessment has been undertaken, which is appropriate for a TWAO and outline planning permission. There are multiple potential solutions based on industry established practice to mitigate impacts to tree RPAs and safeguard existing trees in this location, which have been successfully implemented on other projects. Based on our experience of similar projects, the team is confident that a solution mitigating RPA impacts can be successfully implemented and therefore it is considered that pedestrian access can be provided without material damage to trees resulting in their loss.

- *"Can we mitigate the impacts of wind loading with remedial tree works? How?"*

  Further assessment of the potential impact of wind loading will be carried out to inform the AIA undertaken to discharge the requirements of the reserved matters conditions. This will confirm the extent of this risk and establish appropriate mitigation measures. Example mitigation could include arboricultural interventions such as crown reduction and complementary 'edge planting'. A dedicated AMS will also detail mitigations required to retain trees.

"Re G149

- *JD suggests that wind loading will result in greater area of tree loss than shown in the hatched area. Do you agree? If not, why not?"*

  As per G151, further assessment of the potential impact of wind loading at later design stages will be undertaken to inform the AIA submitted to discharge the requirements of the reserved matters conditions. It will confirm the extent of this risk and establish appropriate mitigation measures. Example mitigation could include arboricultural interventions such as crown reduction and complementary 'edge planting'. A dedicated AMS will also detail mitigations required to retain trees.

"Is it proposed to replace G152?"

G152 is shown to be retained within the submitted AIA.

"JD has suggested that replanting proposed in relation to G149, G151 and G152 may not be feasible/realistic. Are we able to demonstrate it will be? How can the Inspector be satisfied of this?"

See response from Ben Hilder below

The replanting of trees is considered to be entirely feasible and realistic. On the basis that the planting/preparatory works are supervised by a suitably qualified arboriculturist (to prevent undue harm to the retained trees), a process of: stump grinding and removal of arisings; use of an airspade to 'chase out key roots of the felled trees; backfilling with topsoil (containing nitrogenous fertiliser to counteract likely nutrient lockup); resting of the ground for the duration of the station construction works; creation of planting pits offset from the position of the previous trees; the use of containerised trees (instead of rootballed trees) to minimise ground disturbance; and the sett-up of a long term landscape management plan – would all combine to ensure the successful establishment of replacement trees.