Reusing Concrete in Construction | 07.10.25 | Q&A written responses

Question	Answer
In absence of as-built information, is there a method of determining the make-up of existing concrete?	Thanks, Serkan has just answered this
Tom: Does the removal of concrete sections compromise the stability/safety of the building during demolition?	I think you'd need to assess this on a case by case basis for temporary stability to see if the load path still works for construction loading when you have removed continuity from bits of the slab and how many vertical and lateral props you will need. You could programme it in a way that's more favourable, such as from the top of the building.
Are there any types of concrete that are not recommended for reuse (e.g. reinforced concrete containing calcium chloride admixtures) and how can we make sure these concretes are not used if there is a lack of building data?	Any elements having any hazardous material should be handled carefully. In our case studies, an environmental screening for these issues are performed before starting reusability assessment as these conditions can be dangerous to work for practitioners as well.
Question for Laura (Heyne Tillett Steel): for the bearing detail of the infill slabs, are they designed to be simply supported only? Do they also participate in the lateral system as a diaphragm? Also when the slabs are loaded in bending, is the screed assumed to prevent any uplift at the supports?	Hi Tracy, since this is designed as a soft spot, it's seen as an opening in the diaphragm of the floor which means we don't need the reused panels to provide diaphragm action (which is handy!). The slabs are heavy enough to not lift up at their ends, and the screed is there to provide continuity
Question for Laura on Brunswick Centre: did it help the positive outcomes that the structure to be adapted was underground? Would it work for a brutalist office block over multiple floors?	Hi Kerstin, it could work (with adjustments to the resupport detail) above ground too. We have developed a detail for this, but as yet there are no case studies to try it on! It's more difficult for in situ concrete than framed structures like steel + composite, due to the monolithic nature of the concrete. But we think it's possible
Hi Laura, Tom, I think I might have missed out on this, can you explain how you are reconnecting the cut-off slabs when you reuse them?	Hi, for our Knightsbridge Green project we are proposing a bearing detail on a new band beam, with a screed on top with a mesh. One of my slides shows the detail!

Hi Laura, Tom, I think I might have missed out on this, can you explain how you are reconnecting the cut-off slabs when you reuse them?	oh ok, thank you for clarifying!
Laura - Above ground floor to floor height constraints are often used as justification for demolition. Can you comment on propagating the below-ground Brunswick basement methodology above-ground, and are the savings in cost and carbon expected to be similar? Any differences, additional constraints?	Hi Tim, what we've proposed below ground can be applied above ground too! I am trying to think if there are any fundamental differences but for this particular idea I don't think there are!
Laura - Above ground floor to floor height constraints are often used as justification for demolition. Can you comment on propagating the below-ground Brunswick basement methodology above-ground, and are the savings in cost and carbon expected to be similar? Any differences, additional constraints?	Thanks Laura, I imagine the slab to column connections high up the building would be very different vs the lowest basement level (where they can rest on block and sleeper dwarf walls). Amazing project at Brunswick though!
Laura - Above ground floor to floor height constraints are often used as justification for demolition. Can you comment on propagating the below-ground Brunswick basement methodology above-ground, and are the savings in cost and carbon expected to be similar? Any differences, additional constraints?	Oh yes you're right, bearing directly on the foundations makes this much easier. But we've been cooking up resupport details for moving slabs up too, which could be applied at any level (with strengthening if required!)
Question for Tom, how do you identify destinations for reusing concrete slabs? If i have a project at design stage, where could i look to see where i can find some concrete for reuse ? Is there a intention for creating some centralised database or directory of some sort?	i agree the aspiring reuse industry needs a database of material with say an AI search facility