I have reviewed documents submitted to discharge Planning Conditions 10, 12 and 13 from an ecology perspective.

The following matters should be addressed prior to discharge of the relevant planning conditions

| **Item** | **LCC Ecology Comments****Red text = minutes from LCC/EA/Jacobs meeting 08.12.2021 to discuss comments & agree way forward** | **Drawing updates** |
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| **Condition 10 – Construction Environmental Management Plan (CEMP)** |
| 1 | **Condition 10 – Construction Environmental Management Plan (CEMP)**It is stated within the submitted CEMP that "*The development of a project specific CEMP will flow from the EMS-01 Environmental Planning Meeting Agenda / HSE-60 Health, Safety, Environmental and Quality Planning Meeting Agenda with sections amended, deleted or added as required*". It is that project specific CEMP that will need to be submitted to discharge Condition 10. The Construction Environmental Management Plan that has been submitted (Section 3 of the Site Management Plan) does not provide the necessary site specific detailed measures that will be implemented. The submitted CEMP is a generic document with many matters to be finalised. Furthermore, the CEMP appears to be a draft document that still contains annotated queries. Additionally, the CEMP refers to an Environmental Action Plan (ENV0000009C-JAC-ZZ-00-RP-EN0006) for the works. It does not appear that any document with this reference number has been provided. It should be ensured that all appendices to the final CEMP are provided before the planning condition is discharged.  |  |
| **Condition 12 – Landscaping and habitat establishment and management plan for land within the application site** |
| 2 | Ribble Sidings DrawingIn relation to Ribble Sidings, the landscape proposals plan cross refers to Drawing No ENV0000009C-JAC-Z2-42X-DR-L-0002. This plan does not appear to have been provided.  | To be issued |
| 3 | Extent of amenity grasslandThe proposals include the creation/reinstatement of a large extent of amenity grassland throughout the scheme. This would be a missed opportunity for establishment of additional wildflower grassland. The extent of amenity grassland should be re-examined to identify any additional opportunities for wildflower grassland creation. This may also reduce the need for imported topsoil and would add to the biodiversity gains for the site. Wildflower grasslands should generally be established on subsoil. However in topsoiled/nutrient-rich areas, establishment of wild flowers could still be attempted and may be successful if suitably competitive wild flower species are selected. In nutrient-rich areas I would suggest: Consider species rich mix along BAC access route* *Achillea millefolium* – Yarrow
* *Agrostis capillaris* – Common Bent
* *Centaurea nigra* - Common Knapweed
* *Cynosurus cristatus* – Crested Dog's-tail
* *Festuca rubra* – Red fescue
* *Geranium pratense* - Meadow crane's-bill
* *Hypocharis radicata* - Cat's ear
* *Lathyrus pratensis* - Meadow vetchling
* *Leontodon autumnalis* - Autumn hawkbit
* *Leucanthemum vulgare* - Ox-eye daisy
* *Lotus corniculatus* - Bird's-foot-trefoil
* *Plantago lanceolata* - Ribwort plantain
* *Prunella vulgaris* - Selfheal
* *Ranunculus acris* - Meadow buttercup
* *Rhinanthus minor* - Yellow rattle
* *Rumex acetosa* - Common Sorrel
* *Trifolium pratense* – Red clover
* *Vicia cracca* - Tufted vetch
 | Added to BAC and Miller Gardens Apartments Sheet 9 & 10 - plots G9.1, G9.2, 9.4 (sheet 9). Overall plant schedule updated (sheet 21) |
| 4 | Extent of ornamental plantingThe planning condition requires a locally native tree/shrub planting and seed specification. Nevertheless, extensive areas of ornamental planting are proposed. I recognise that ornamental planting may be necessary in some situations, such as any required like-for-like garden reinstatement, but this should be minimised.  Although parts of the site are in an urban setting, they are also within or connected to the River Ribble BHS, a river corridor comprising sensitive habitats and connected to statutory designated sites downstream. There is therefore a risk that planting of exotic species will result in their colonisation of sensitive habitats within or adjacent to the BHS or elsewhere along the river corridor. Ornamental planting should therefore be minimised and should only be used where native species cannot provide the required landscape function and there is no risk of colonising sensitive sites/habitats. R. Sidings boundary planting – consider replacing with native species such as holly, wild privet | * Ribble Sidings boundary planting - Prunus laurocerasus replaced with Privet and Holly, as require evergreen in mixes to provide screening for visual receptors near the proposed embankment and flood wall.
* Native Shrub Mix C, plots 13.7 & 13.9 (sheet 13)
* Native Shrub Mix D, plots 13.8 (sheet 13), 14.4 & 14.5 (sheet 14)
* Native Shrub Mix E, plots 14.1 & 14.2 (sheet 14)
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| 5 | Seeding & Planting  mixesThe planning condition requires a locally native tree/shrub planting and seed specification. Planting and seeding mixes throughout the site include species that are not locally native (and in some cases not native). One of the proposed species for garden restoration (*Crocosmia × crocosmiiflora* – Montbretia) is listed on Schedule 9 of the Wildlife & Countryside Act 1981 (as amended) – It would be an offence to cause this plant to grow in the wild. To be removed. There is a risk that this plant could spread from restored gardens into the wild. It should therefore be removed from the planting proposals. All planting/seeding schedules should be checked to ensure that they do not include any species listed on Schedule 9 of the Wildlife & Countryside Act. The following species should be removed from the proposed seeding/planting mixes:* *Acer campestre* – Field maple – change to Alnus
* *Campanula trachelium* – Nettle-leaved Bellflower
* *Carpinus betulus* – Hornbeam – Agreed to leave in as doubtful the existing would be removed.
* *Cirsium eriophorum* – Woolly thistle identify where this is specified
* *Cornus sanguinea* – Dogwood (to avoid horticultural varieties) – to check and update
* *Crocosmia × crocosmiiflora* – Montbretia (listed on Schedule 9 of the Wildlife & Countryside Act 1981 (as amended) – It would be an offence to cause this plant to grow in the wild)
* *Populus alba* – White poplar change to Wych Elm
* *Prunus laurocerasus* – Cherry laurel replace with holly and wild privet
* *Ribes sanguineum* – Flowering currant requested by PCC?, Anna to check
* *Salix alba* – White willow change to Silver Birch
* *Sanguisorba minor* – Salad burnet
* *Silaum silaus* – Pepper saxifrage remove

The proposed hedgerows would not be species-rich and would not be typical of hedgerows in the wider landscape. I suggest that the hedgerow planting mixes should comprise at least seven species per 30m length, including (for example): increase number of species in spec * *Corylus avellana* – Hazel
* *Crataegus monogyna* – Hawthorn (Dominant hedgerow species)
* *Ilex aquifolium* – Holly
* *Ligustrum vulgare* – Wild privet
* *Lonicera periclymenum* – Honeysuckle
* *Prunus spinosa* – Blackthorn
* *Quercus robur* – Pedunculate oak
* *Rosa canina agg*. – Dog rose
* *Sorbus aucuparia* – Rowan
* *Ulmus glabra* – Wych elm
* *Viburnum opulus* – Guelder rose

As per the planting mixes proposed for Fishwick Bottoms (Condition 13) it would be appropriate to extend planting of *Ulmus glabra* (Wych elm) within the main site for the benefit of the White-letter Hairstreak butterfly. Use in place of White PoplarThe following link provides guidance on locally native species suitable for habitat creation in Lancashire. This list should inform revised seeding/planting proposals (N.B. Fraxinus excelsior – Ash, cannot currently be planted owing to Ash dieback and associated restrictions):[Plant-species-appropriate-for-habitat-creation-in-Lancashire.pdf](https://eur03.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwww.lancashire.gov.uk%2Fmedia%2F446096%2FPlant-species-appropriate-for-habitat-creation-in-Lancashire.pdf&data=04%7C01%7Cconnor.mcilwrath%40environment-agency.gov.uk%7Cc7597db0941f4c7a8c9b08d9a8ede652%7C770a245002274c6290c74e38537f1102%7C0%7C0%7C637726561984415513%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Ik1haWwiLCJXVCI6Mn0%3D%7C3000&sdata=fX2yRQoDGmuAcZeY8m6XA6TPAbrr%2BTeg4UQq3nPv2Rw%3D&reserved=0) | * Crocosmia deleted from garden planting beds on sheet 10, plots 10.3, 10.4 and 10.5 and replaced with Bergenia ‘Silbernicht’
* Acer campestre changed to Alnus glutinosa on Sheets 13 and 14 and 5no. trees on Ribble Sidings drawing.
* Nettle-leaved Bellflower deleted and schedule updated - Ribble Sidings.
* Woolly thistle not specified.
* Cornus sanguinea horticultural varieties checked and limited to Broadgate Gardens, Miller Gardens Apartments, and Penwortham Methodist church ornamental beds.
* Crocosmia deleted from sheet 10, plots 10.3, 10.4 and 10.5 and changed to Bergenia ‘Silbernicht’
* Populus alba replaced with Ulmus glabra (Wych Elm) Sheet 12 & 13.
* Prunus laurocerasus replaced with holly and privet (see note in item 4 above)
* Ribes sanguineum cultivar within Native Shrub Mix E, plots 14.1 & 14.2 (sheet 14) deleted and changed to holly and viburnum. The cultivar proposed for Broadgate Gardens ornamental planting areas was requested by PCC.
* Salix alba replaced with Betula pendula (silver birch) on Sheet 12.
* Salad burnet replaced with Greater Burnet in Species-rich grassland mix. (Sheet 12 & 13 and 14) Schedule update on sheets 12 and 14) (Sheet 13 refers to Sheet 14 for schedule).
* Silaum silaus not specified,
* Hedgerows: Native Hedgerow mix (Plot 9.3 and 9.4, Sheet 9) updated to have 7 species per 30m length.

Refer to note in 6th bullet point above for Ulmus glabra.* Overall plant schedules for above amendments to planting proposals and seed mixes updated.
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|  | PlantingBare root stock is proposed for tree planting to discharge condition 12, whereas cell grown plants are proposed for planting required by Condition 13 in order to improve chances of establishment. It would be appropriate to use cell grown stock throughout to improve chances of establishment. Spec to be changed to cell grownPlanting of water bodies is proposed. On various previous schemes, this has resulted in accidental introduction of non-native invasive species. I therefore suggest that margins of water bodies should be seeded rather than planted. Consider using seed.  | * Bare-root stock changed to cell grown 1+0, 40-60cm
* Sheet 13, Shrub Mix A, B and C (Plots 13.1 to 13.9)
* Sheet 14 Shrub mix A, D and E (Plots 14.1 to 14.5)
* Sheet 17, Native tree and shrub planting (Plot 17.1)
* Ribble Sidings plots R1.12 and R1.13.
* Overall plant schedule updated.
* Ribble Sidings - Wetland planting plots R1 to R1.11 changed to Species rich grassland - Wildflowers for pond edge (Mix EP1F Emorsgate)
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|  | Establishment maintenanceAn establishment maintenance/replacement planting period of 1 year is proposed. This is not sufficient to ensure successful establishment of habitats. A 5 year establishment maintenance period (as proposed for planting required by Condition 13) would be appropriate. 5 year establishment period to be set out in MP for 12 – check wording. Align with C13. | LHEMP – not done yet |
|  | Grassland managementFor wildflower grasslands, 2 cuts per year are proposed, the first in July and the second between October and December. I recommend that the first cut be delayed until late August/Early September to ensure that wild flowers are given the opportunity to set seed. Update doc. Is one cut sufficient?  | LHEMP updated pg 28, 2 cuts left in as depending on the weather 2 cuts may be required. |
|  | Hedgerow ManagementThe hedgerows should be managed for wildlife in accordance with recognised guidelines such as Hedgelink: [Hedgerow Management Advice | Hedgelink](https://eur03.safelinks.protection.outlook.com/?url=https%3A%2F%2Fhedgelink.org.uk%2Fhedgerows%2Fhedgerow-management-advice%2F&data=04%7C01%7Cconnor.mcilwrath%40environment-agency.gov.uk%7Cc7597db0941f4c7a8c9b08d9a8ede652%7C770a245002274c6290c74e38537f1102%7C0%7C0%7C637726561984425466%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Ik1haWwiLCJXVCI6Mn0%3D%7C3000&sdata=MnNu%2BekLArxqQ%2Bhp5tuoLzkY%2FwQgUvBJE0HPe2fYei4%3D&reserved=0)[HEDGEROW MANAGEMENT AND COSTS (hedgelink.org.uk)](https://eur03.safelinks.protection.outlook.com/?url=https%3A%2F%2Fhedgelink.org.uk%2Fcms%2Fcms_content%2Ffiles%2F65_hedgerow_management_and_wildlife.pdf&data=04%7C01%7Cconnor.mcilwrath%40environment-agency.gov.uk%7Cc7597db0941f4c7a8c9b08d9a8ede652%7C770a245002274c6290c74e38537f1102%7C0%7C0%7C637726561984425466%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Ik1haWwiLCJXVCI6Mn0%3D%7C3000&sdata=uTcjGVv7v%2FGkwDeorv5J2hLW2r0bgRkDW%2FapfthXaGQ%3D&reserved=0)The proposed hedgerow management should be reviewed to ensure that these guidelines are applied.  | checked |
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|  | MonitoringNo detailed habitat monitoring methods have been submitted. This is required by Condition 12d and should be provided before the planning condition is discharged. Monitoring of habitat establishment should include input from a suitably qualified and experienced ecologist. As well as monitoring the establishment of species and habitats, monitoring should include provision of evidence that prescribed management operations have been implemented.  | LHEMP – not done yet |
|  | Bird and bat boxesThe proposed number of bird and bat boxes is very low (3 nest boxes and 3 bat boxes) and is not supported by any rationale. The boxes should be at least equivalent to the number of roosting and cavity nesting opportunities lost as a result of the scheme (with reference to findings of the ecological impact assessment). The boxes should be sufficient to sustain existing populations of relevant species until replacement planting is sufficiently mature to provide replacement nesting/roosting  opportunities. It seems likely that significantly higher numbers of bat and bird boxes would be required in order to provide this function. Have any low bat roost trees been removed – replace each tree with 2/3 boxes. Look to local conservation groups to maintain.  | LHEMP – not done yet |
|  | Invasive SpeciesThe Landscape and Habitat Establishment and Management Plan refers to a separate invasive species management plan. This does not appear to have been provided. It should be ensured that all appendices to the Landscape and Habitat Establishment and Management Plan are provided before discharge of the planning condition. Latest INNS management plan to be submitted | See red note  |
| **Condition 13 - Landscaping and habitat establishment and management plan for Fishwick Bottoms** |
|  | Figure 1.12, Environmental Masterplan for Fishwick Bottoms indicates that the exact location of elements of the planting scheme are to be confirmed. The Landscaping proposals for Fishwick Bottoms note items to be agreed, for example, the location of fences and gates, planting locations, Willow Stake, screef mound specification etc. The location of proposed fencing should also be shown on the plan. These matters should be resolved prior to discharge of the planning condition. Plan to be updated | Stockproof Fencing and field gates added to sheet 19. Figure 1.12 updated to match Sheet 19 – woodland planting plots, plant schedules, fencing, field gates and screef mound added. |
|  | The Landscape and Habitat Establishment and Management Plan refers to a separate invasive species management plan. This does not appear to have been provided. It should be ensured that all appendices to the Landscape and Habitat Establishment and Management Plan are provided before discharge of the planning condition. Check INNS plan. PEA for Fishwick.  |  |
|  | No detailed habitat monitoring methods have been submitted. This is required by Condition 13d and should be provided before the planning condition is discharged. Monitoring of habitat establishment should include input from a suitably qualified and experienced ecologist. As well as monitoring the establishment of species and habitats, monitoring should include provision of evidence that prescribed management operations have been implemented. Success criteria, activities | LHEMP – not done yet |
|  | Engineering drawing updates:Sea Cadets – slipway location moved to the west so it matches the GA drawingMiller Park Entrance – drawing matches GA drawing therefore no updates required.BAC fencing height updated to 2.0m high (Sheet 9)  |  |
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