Client:	Thurlaston Parish Council
Site Location:	Thurlaston Meadows Care Home and Patricksfield Main Street Thurlaston CV23 9JS
Rugby Borough Council Planning Reference:	R20/1030
Date:	Wednesday, 30 December 2020
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PLANNING APPLICATION APPRAISAL

A desktop critique of the planning application and reports for the proposed development at Thurlaston Meadows Care Home and Patricksfield

This report has been commissioned by Thurlaston Parish Council to consider the evidence submitted for the planning application R20/R1030, at Thurlaston Meadows Care Home and Patricksfield

Thurlaston Parish Council requested permission from Eastdene Investments Limited and APC Planning via Rugby Borough Council to access the site to enable the submitted planning documents to be critically appraised and ground truthed. Unfortunately, access was denied by the agent, APC Planning, and so this report is based on a desktop appraisal supported by aerial footage, photographs from the site perimeter, local knowledge and online information.

Executive summary

The following are extracts from the body of this report and highlight the main areas of concern.

- The Applicant's assessment quantifies the Onsite Biodiversity Impact habitat area as 2.42ha. It states that 3.44ha of total biodiversity will be retained and enhanced. The total site is measured as 3.42ha. 40 new homes, 80 parking spaces, tennis courts, a shop and community building, new roads and pavements are to be built where there previously were only two buildings and significantly less hard standing. How can an area of 3.44ha of greater biodiversity be created? There is not the physical area for this to happen. You cannot cover half a meadow in concrete and then say you will still have more than one meadow at the end. The Biodiversity Impact calculations are flawed.
- The Preliminary Ecological Report states that 'The features of highest ecological value are the developing woodlands, hedgerows, scattered trees, marshy area, pond and parkland which have moderate wildlife value.' Yet it is a large component of these very features which are being removed to facilitate the development.
- Records of grass snakes (*Natrix natrix*), the Great Crested Newt (*Triturus cristatus*) and slow worms (*Anguis fragilis*) demonstrate these reptiles are currently living within the site (Image 2). The recommendations within the Preliminary Ecological Appraisal report may wish to be reviewed and give much greater consideration to reptiles in light of this knowledge and extend their habitat protection given the status of these species. The Great Crested Newt is a European protected species, and the grass snakes and slow worms are Priority Species under the UK Post-2010 Biodiversity Framework.
- The lack of consideration regarding the location of the site and how it forms a central link for wildlife and habitat corridors through Thurlaston is sadly lacking within the report (Image 1).
- The site is central to Thurlaston. It is Thurlaston's largest greenspace within the village's residential boundary and as Image 1 shows, is the hub of the wheel to which the spokes are connected. Those spokes are other hedgerows, hedgebanks, shelterbelts and lines of mature trees. The site will no doubt act as a significant reserve for species migrating along these wildlife corridors, particularly as it is a blend of various habitats as described in the Preliminary Ecological Report.
- Two mature ash trees have been identified in the Preliminary Ecological Report as high bat roost potential. The Arboricultural Impact Assessment highlights two ash trees (T156 & T158) in this location as having defects, one to be removed and one to have significant

works to the crown to remove the defects. There is no documentation cross referencing these trees to identify whether they are the same. Having been refused access to the site there is not the opportunity do this cross referencing. Tree works are normally completed between September and March (outside breeding bird season). Bat surveys are normally completed between May and September. There is a real risk such tree works could destroy a potential bat roost, which is illegal.

- When using the Biodiversity Impact Calculator, the 'down trading' correction considers biodiversity gain of one distinctiveness cannot compensate for impacts/losses of a higher distinctiveness. In addition, losses to high distinctiveness habitats must be compensated like-for-like. A score of 4.86 for a woodland habitat is to be lost. It then states a score of 5.90 woodland habitat is to be gained. This is untrue. The plans show there is to be no woodland planting, just individual street and garden trees planting. The individual tree planting is of a lesser distinctiveness than the current woodland and mature tree scape in existence. The calculation is simply untrue and the report offers no explanation as to where this additional woodland habitat is being created.
- Nearly a third of the site's trees are to be removed or directly impacted on by the development. 75 trees are to be removed. 69 because they directly conflict with the proposed development. 26 are category B trees, desirable to retain. 5 category A, high quality trees with a life expectancy greater than 40 years, and a further 14 category B trees require mitigating works due to the constraints placed on them by the proposed development.
- 6 Category B trees, with heights between 18 to 22m and crown spreads between 13 – 17m are being removed, simply because they are in the way of development. These are trees considered to be second to the best within the site.
- Highly significant trees are being removed or being built very closely to, to enable this development. T221, an 18m tall, 8m wide Giant redwood tree (highest category, A1) will have 54 metres of vertical wall and 2 parking spaces built within its 15m radius Root Protection Area (RPA), encroaching up to 9m inside this zone. The tree will cast shade on the two closest properties all year round.
- The loss of biomass and biodiversity within this site, to accommodate the scheme, is very high. All the category B trees to be removed are mature trees and replacing them with a young street or garden tree, which will not be a species that has the capacity to grow as large as those trees being removed (up to 20m with a 10-15m canopy spread) means a distinctive overall loss of biomass and habitat.
- Properties are being built within the Root Protection Area of T213 (a 15m tall, 10m wide purple beech which will require regular pruning to keep the canopy off the roof) and T282 and 283. Under these latter 2 trees 16m of vertical wall will be constructed within the RPA of which at least 9m will be under the canopy. The canopy clearance above ground level is 2m, which means the trees will have to be significantly crown lifted to grant clearance to the building.
- The proximity of the trees to many of the properties will mean they will likely come under pressure for removal from home insurance companies, particularly as the soil type for the area does include a quantity of clay, so the effects of shrinkage and plasticity may become a factor. Many of the mature trees to be retained are also Ash, which are notorious for

shedding small twigs in heavy winds, and will cause concern to residents and put further pressure on the trees to have works done to them in the future.

- The applicant's Sustainability Statement says the dwellings have been orientated to ensure the principal rooms face south/south west, with larger south/southwest facing windows and bifold doors where appropriate to maximize the solar gain during the winter months. No consideration of shading from large trees has been demonstrated. Many of the properties' principal rooms with large windows will be in shade all year round. The scheme is poorly designed in relation to the mature tree scape. No proper consideration has been given for significance of the mature trees in this site within the wider context of the village. The proposed development will see a huge loss of the mature tree scape, which is highly visible from the public footpath and adjacent lanes. Where trees are to be retained, the best trees are still being compromised by the layout of the properties, which are being built too close to the trees, frequently within the canopy and the root protection areas.
- Surface water from an area in excess of 1000m^2 (highways and buildings) will naturally flow into the pond. Water attenuation schemes must be in place to ensure no pollutants enter the pond or cause the pond to overflow and cause localised flooding. This would also impact on a habitat known to host Great Crested Newts.
- Rugby Borough Council recently declared a climate emergency and carbon neutral agenda. It should be a material consideration in that this development will result in a significant loss of mature trees, reducing local carbon mitigation and air pollution benefits; the loss of greenspace will have a local impact on the residents of Thurlaston.
- An assessment should be made as to whether this proposed development, whilst perhaps directly benefitting the new owner occupiers, will have a greater detrimental impact on the village as a whole.
- This report concludes this scheme should be rejected in its current form due to the impact on the trees, woodland, itinerant wildlife and landscape.

<u>Preliminary Ecological Appraisal</u>

Protected & Notable Species

Dormice

The Preliminary Ecological Appraisal does not mention Dormice in the Protected & Notable Species Occurrence Tables. They are protected species, which may certainly be present in the site given its connectivity to the wider countryside (Image 1). They should certainly be a consideration within the report yet are absent. The lack of consideration regarding the location of the site and how it forms a central link for wildlife and habitat corridors through Thurlaston is sadly lacking within the report. The site is central to Thurlaston. It is Thurlaston's largest greenspace within the village's residential boundary and as Image 1 shows, is the hub of the wheel to which the spokes are connected. Those spokes are other hedgerows, hedgebanks, shelterbelts and lines of mature trees. The site will no doubt act as a significant reserve for species migrating along these wildlife corridors, particularly as it is a blend of various habitats as described in the Preliminary Ecological Report.

Image 1: Red - site location. Blue - wildlife and habitat corridors, showing proposed development is central to the habitat links through the village and beyond

Reptiles

There are also records of grass snakes (*Natrix natrix*), the Great Crested Newt (*Triturus cristatus*) and the Slow worm (*Anguis fragilis*) living within the site. A local resident, Steve Murphy, has monitored these species for the past 20 years using reptile survey mats. He has recorded grass snakes and slow worms breeding, with photographic evidence as recent as 2019. The image below shows juvenile grass snakes and slow worms found within the site. Another neighbour, Sue Winton, also has records of Great Crested Newt within 25m the site. Whilst it is appreciated the habitats of the grass snake and slow worm are not granted protected status, the disturbance and avoidance methods, as well as mitigation by post development construction of a reptile hibernacula recommended within the Preliminary Ecological Appraisal report may wish to be reviewed and give much greater consideration to these reptiles, in light of this knowledge, and extend to habitat protection given the status of these species, which are Priority Species under the UK Post-2010 Biodiversity Framework.

With respect to the Great Crested Newt a full GCN survey should be conducted and appropriate action taken to ensure the protection of the European protected species.

Image 2: Juvenile Grass snakes and a Slow worm (copyright: Steve Murphy, 2020)

Image 3: Great Crested Newt photographed within 25m of Patricksfield (copyright: Sue Winton, 2020)

Bats

Some of the mature ash are noted to have high bat roost potential (Hedge I and Parkland K) and moderate bat roost potential (Woodland C). The site has high suitability for bat foraging and commuting. Two bat activity surveys are recommended, and these should be completed at the right time of year. A stage 1 survey relating to trees is best completed from December to March, when leaves are absent. As the trees are already identified as high potential for bat roosts the further

surveys (stage 2 and 3) should be completed. These tend to be completed between May and September. It is recommended this occurs before any tree works are undertaken.

The Applicant's Preliminary Ecological Report states that there are mature ash trees near to the pond which have a high bat roost potential. The Arboricultural Impact Assessment highlights two ash trees (T156 & T158) in this location as having defects. T156 is recommended to remove. T158 recommended for 2 limbs to be reduced or removed. It must be ascertained that these trees are not the same as those with the high bat roost potential, and that the works will not remove such potential. Destroying a bat roost is illegal and it is recommended a bat roost survey is carried out on these trees prior to any works. If the trees have high bat roost potential then the trees should be retained, even if minor works are required to make them safe.

Habitats

The Preliminary Ecological Report states that 'The features of highest ecological value are the developing woodlands, hedgerows, scattered trees, marshy area, pond and parkland which have moderate wildlife value.' Yet it is a large component of these very features which are being removed to facilitate the development.

Biodiversity Impact Assessment

The site overall is 3.4ha (34,276m^2), which is mainly open native woodland, parkland trees, lawn and improved grassland'. Much of this land (1.4ha or 11,153m^2) will disappear under hard structures; buildings and roads. 2.2ha (22,307m^2) is to be natural landscaping [Ref: Proposed site plan Drg. No. 3703-101].

In the Biodiversity Impact Assessment the calculation states that the Onsite Biodiversity Impact habitat area is 2.42ha, and after the development only 0.05ha of this will be retained and 0.97ha enhanced (though there is no explanation of what this enhancement will look like; an environmental enhancement scheme is recommended). It is then proposed to create a further 2.42ha of biodiversity, yet the drawings only show 0.05ha (500m2) of grassland and 0.04ha (400m2) of deciduous tree planting, and a further smaller yet unmeasured area of deciduous tree planting, if required. The Preliminary Ecological Appraisal does discuss erecting bird and bat boxes to compensate for the loss of breeding and roost sites through tree removal, thus changing distinctiveness (see below). It also discusses native planting, wildflower seeded lawns and changing mowing regimes but the reality is lawns will not be left unmown from spring until late summer in a residential setting. The community pressure to have the lawns tidy is much the same as the pressure which will be on those trees shown to be retained within metres of properties, causing shade, leaf drop and fear of tree failure. Such social pressure must be recognised within any development and a material consideration in the design (BS5837: 2012 Trees in relation to design, demolition and construction – Recommendations).

If the original Onsite Biodiversity Impact habitat area is 2.42ha, and 40 new homes, 80 parking spaces, tennis courts, a shop and community building, new roads and pavements are to be built where there previously were only two buildings how can an area of 3.44ha of greater biodiversity be created? There is not the physical area for this to happen. You cannot cover half a meadow in concrete and then say you will still have more than one meadow at the end. It's a mathematical impossibility.

In addition, when using the Biodiversity Impact Calculator, the 'down trading' correction states that the biodiversity gain of one distinctiveness cannot compensate for impacts/losses of a higher distinctiveness. In addition, losses to high distinctiveness habitats must be compensated like-for-like. To suggest that a score of 4.86 for a woodland habitat is to be lost and then 5.90 gained is untrue. The plans show there is to be no woodland planting, just some additional individual street and garden trees planted. The individual tree planting is of a lesser distinctiveness than the current woodland and mature tree scape in existence. The calculation is simply untrue and the report offers no explanation as to where this additional woodland habitat is being created. [EB-Biodiversity-Impact-Calculator-Guidance_v2.pdf (environmentbank.com)]

The same can be said for the grassland. Whilst the grassland is not a high-quality habitat, being improved with low significant grassland species, it is questionable that removing most of it and replacing it with a much lesser area truly does offer a score of 4.36 positive impact as suggested on the Habitat Impacts table I in the Biodiversity Impact Assessment report. Particularly as the replacement will be with something akin to perennial ryegrass lawns, with wildflower verges and only 0.05ha (500m2) of wildflower meadow (if that is what 'grassland to be planted' means in the Proposed Site Plan).

It is strongly considered that the Biodiversity Impact calculations are severely flawed and cannot be relied upon in this assessment.

Biodiversity opportunities

The list of biodiversity opportunities on p34 of the Preliminary Ecological Report are good but a greater opportunity for the Great Crested Newt and other reptiles should be implemented as part of any development plan.

The pond is reported to be stocked with fish (rainbow, brown trout and carp) and considered a low habitat for Great Crested Newt, but they are present at site and locally. There is no evidence fish are present, nor what species or density (an electro fishing survey could be undertaken)). It would be unusual to find brown and rainbow trout surviving in a static field pond due to the low oxygen levels. If such fish are present in the pond the fish could be removed and habitat improved by some tree works to reduce shading to enable the GCN population to increase further. The Preliminary Ecological Report states GCN have been found within 100m of the eastern boundary of the site, and statements by local residents say they breed within the pond. There is an evidence statement by Sue Winton, with photographs, which show GCN are present within 25m of the pond and have also been witnessed to be breeding at the pond.

Arboricultural Impact Assessment

The Arboricultural Impact Assessment is well written and gives an honest appraisal of the tree scape and required works. However, it is again written to favour the development.

The following extract from BS5837 (2012) Trees in relation to design, demolition and construction – Recommendations should be considered:

'5.1.1 The constraints imposed by trees, both above and below ground should inform the site layout design, although it is recognized that the competing needs of development mean that trees are only one factor requiring consideration. Certain trees are of such importance and sensitivity as to be major constraints on development or to justify its substantial modification. However, care should be

taken to avoid misplaced tree retention; attempts to retain too many or unsuitable trees on a site can result in excessive pressure on the trees during demolition or construction work, or post-completion demands for their removal.

5.1.2 As trees can affect and be affected by many aspects of site operations, during the conception and design process the project arboriculturist should be involved in ongoing review of layout, architectural, engineering and landscape drawings. All members of the design team should be made aware of the requirements for the successful retention of the retained trees and should make provision for these throughout the development process.

5.2 Constraints posed by existing trees

5.2.1 The RPA (see 4.6) and any other relevant constraints should be plotted around each of the category A, B and C trees on relevant drawings, including proposed site layout plans.

NOTE RPAs represent below-ground constraints. Above-ground constraints might arise from the following attributes:

a) the current and ultimate height and spread of the tree;

b) species characteristics, including evergreen or deciduous, density of foliage, and factors such as susceptibility to honeydew drip, branch drop, fruit fall, etc.

5.2.4 Particular care is needed regarding the retention of large, mature, over-mature or veteran trees which become enclosed within the new development (see 4.5.11). Where such trees are retained, adequate space should be allowed for their long-term physical retention and future maintenance.

NOTE The presence of large species trees is increasingly being seen as advantageous, since it contributes to climate change resilience, amongst other benefits. Achieving successful integration of large species trees requires careful consideration at the conceptual and design stages.

5.3 Proximity of structures to trees

5.3.1 The default position should be that structures (see 3.10) are located outside the RPAs of trees to be retained. However, where there is an overriding justification for construction within the RPA, technical solutions might be available that prevent damage to the tree(s) (see Clause 7). If operations within the RPA are proposed, the project arboriculturist should:

a) demonstrate that the tree(s) can remain viable and that the area lost to encroachment can be compensated for elsewhere, contiguous with its RPA;

b) propose a series of mitigation measures to improve the soil environment that is used by the tree for growth.

5.3.2 The cumulative effects of incursions into the RPA, e.g. from excavation for utility apparatus, are damaging and should be avoided. Where there is evidence that a tree has been previously subjected to damage by construction activity, this should be taken into account when considering the acceptability of further activity within the RPA.

5.3.3 On shrinkable soils, the foundation design should take account of the risks of indirect damage, i.e. subsidence and/or heave brought about by changes in moisture content of the soil due to remaining and removed vegetation, as well as the future influence of new planting (see Annex A).

5.3.4 A realistic assessment of the probable impact of any proposed development on the trees and vice versa should take into account the characteristics and condition of the trees, with due allowance and space for their future growth and maintenance requirements. To maximize the probability of successful tree retention, the following factors should be taken into account during the design process.

a) Shading. Shading by trees affects buildings and open spaces.

1) Shading of buildings. Shading of buildings by trees can be a problem, particularly where there are rooms which require natural light.

Proposed buildings should be designed to take account of existing trees, their ultimate size and density of foliage, and the effect that these will have on the availability of light.

2) Shading of open spaces. Open spaces such as gardens and sitting areas should be designed to meet the normal requirement for direct sunlight for at least a part of the day.

NOTE 1 Shading can be desirable to reduce glare or excessive solar heating, or to provide for comfort during hot weather. The combination of shading, wind speed/turbulence reduction and evapo-transpiration effects of trees can be utilized in conjunction with the design of buildings and spaces to provide local microclimatic benefits.

b) Privacy and screening.

It might be highly desirable for trees to provide screening to a building, e.g. for internal privacy, to reduce overlooking by neighbours or to mitigate undesirable views, such as busy roads, railway lines or industrial premises. In order to achieve the desired outcome, account should be taken of the proposed orientation and aspect of the building, the type of building, its use and location relative to the tree, and the species attributes of the tree.

c) Direct damage.

Below-ground damage to structures can occur as a result of incremental root and stem growth. Above-ground damage can occur to trees and structures by the continuous whipping of branches against the fabric of a building. Branch ends might have to be cut back periodically, possibly affecting the shape of the tree. Structures should therefore be designed and/or located with due consideration for a tree's ultimate growth, so as to reduce the need for frequent remedial pruning or other maintenance.

NOTE 2 Exceptions might arise where this is a known and acceptable management outcome (e.g. cyclical maintenance of previously pollarded trees or where retention of desirable trees would otherwise not be feasible).

d) Future pressure for removal.

The relationship of buildings to large trees can cause apprehension to occupiers or users of nearby buildings or spaces, resulting in pressure for the removal of the trees. Buildings and other structures should be sited allowing adequate space for a tree's natural development, with due consideration given to its predicted height and canopy spread. However, this does not mean that trees should not be retained within any particular distance of a structure (see Table A.1 for new planting).

e) Seasonal nuisance. Trees are naturally growing and shedding organisms.

Leaves of some species can cause problems, particularly in the autumn, by blocking gullies and gutters. Fruit can cause slippery patches, and accumulation of honeydew can be damaging to surfaces and vehicles. Buildings, footpaths and hard-standing areas should be designed with due consideration to the proximity of retained trees, especially in terms of their foliage, flowering and fruiting habits. Where conflicts might arise, detailed design should address these issues, e.g. use of non-slip paving; provision of leaf guards or grilles on gutters and gullies; provision of access and means of maintenance.'

BS 5837 (2012) Table 1, shown below, explains what the A, B, C, U categories are in the Arboricultural Impact Assessment.

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Table 1 **Cascade chart for tree quality assessment**

Category and definition	Criteria (including subcategories where appropriate)			Identification on plan
Trees unsuitable for retention (see Note)				
Category U Those in such a condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years	• Trees that have a serious, irremediable, structural defect, such that their early loss is expected due to collapse, including those that will become unviable after removal of other category U trees (e.g. where, for whatever reason, the loss of companion shelter cannot be mitigated by pruning) • Trees that are dead or are showing signs of significant, immediate, and irreversible overall decline • Trees infected with pathogens of significance to the health and/or safety of other trees nearby, or very low quality trees suppressing adjacent trees of better quality *NOTE Category U trees can have existing or potential conservation value which it might be desirable to preserve; see 4.5.7.*			See Table 2
	1 Mainly arboricultural qualities	**2 Mainly landscape qualities**	**3 Mainly cultural values, including conservation**	
Trees to be considered for retention				
Category A **Trees of high quality** with an estimated remaining life expectancy of at least 40 years	Trees that are particularly good examples of their species, especially if rare or unusual; or those that are essential components of groups or formal or semi-formal arboricultural features (e.g. the dominant and/or principal trees within an avenue)	Trees, groups or woodlands of particular visual importance as arboricultural and/or landscape features	Trees, groups or woodlands of significant conservation, historical, commemorative or other value (e.g. veteran trees or wood-pasture)	See Table 2
Category B **Trees of moderate quality** with an estimated remaining life expectancy of at least 20 years	Trees that might be included in category A, but are downgraded because of impaired condition (e.g. presence of significant though remediable defects, including unsympathetic past management and storm damage), such that they are unlikely to be suitable for retention for beyond 40 years; or trees lacking the special quality necessary to merit the category A designation	Trees present in numbers, usually growing as groups or woodlands, such that they attract a higher collective rating than they might as individuals; or trees occurring as collectives but situated so as to make little visual contribution to the wider locality	Trees with material conservation or other cultural value	See Table 2
Category C **Trees of low quality** with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150 mm	Unremarkable trees of very limited merit or such impaired condition that they do not qualify in higher categories	Trees present in groups or woodlands, but without this conferring on them significantly greater collective landscape value; and/or trees offering low or only temporary/transient landscape benefits	Trees with no material conservation or other cultural value	See Table 2

The report states of the 294 trees surveyed 25 are category A (retention is highly desirable), 160 are category B (retention is desirable), 88 category C (could be retained but would not normally pose a significant constraint on the proposal) and 21 category U (poor quality trees that should be removed, unless valuable habitat conservation value).

75 trees are to be removed. All but 6 because they directly conflict with the proposed development. 26 of these trees to be removed are graded as category B trees, desirable to retain. 5 category A and a further 14 category B trees require mitigating works due to the constraints placed on them by the proposed development. Nearly a third of the site's trees are to be removed or directly impacted on by the development.

The loss of biomass and biodiversity within this site, to accommodate the scheme, is very high. All the category B trees to be removed are mature trees and replacing them with a young street or garden tree, which will not be a species that has the capacity to grow as large as those trees being removed (up to 20m with a 10-15m canopy spread) means a distinctive overall loss of biomass and habitat.

There are a number of trees whose root protection zones are compromised by the development. Rather than alter the development the Arboricultural Impact Assessment has assumed such encroachment is reasonable and techniques adopted to mitigate for the impact on the trees. These techniques are stated in the Arboricultural Impact Assessment.

T221 (category A), a Wellingtonia is one of the best evergreen trees within the site. Yet construction of 2 properties is to occur within 17.8% of its Root Protection Area (RPA), including car parking.

To be absolutely clear, the tree is identified as a category A1 tree. The highest category that can be attributed to a tree using the BS5937:2012 standard. Tree 221 has a stem diameter of 1350mm. It has a root protection radius of 15m. The canopy has a radius of 4m. The nearest building is 5m away, measured on an A1 plan at scale 1:500. The second nearest building is 6m away. So, each building is to be constructed 8m and 9m respectively inside the root protection area. The dark, dense, growing, spreading evergreen canopy will be, if construction is to proceed, within 1m and 2m of the buildings, respectively. In total 54m of vertical wall is to be constructed within the Root Protection Area (RPA), plus 2 car park spaces.

It is stated in the Arboricultural Impact Report that small bore piles be used within the RPA. This relates to section 7.5.4 in BS5837: 2012 that 'slabs for larger structures (e.g. dwellings) should be constructed with a ventilated air space between the underside of the slab and the existing soil surface (to enable gas exchange and venting through the soil surface). In such cases, a specialist irrigation system should also be employed (e.g. roof run-off redirected under the slab). The design of the foundation should take account of any effect on the load-bearing properties of underlying soil from the redirected roof run-off. Approval in principle for a foundation that relies on topsoil retention and roof run-off under the slab should be sought from the building control authority prior to this approach being relied on.' No method for this construction has been seen as part of this planning application. In my professional opinion no such construction could take place and this tree be reasonably retained within the development without undue pressure to remove it within 5 years.

This tree and the immediate groups of trees are also south of the affected properties. Shading from the 18m tall and 8m wide evergreen tree will be very significant. Using a shadow calculator (Online calculator: Shadow length (planetcalc.com)) and inputting the longitude and latitude of Tree 221

location the length of shadow at the winter and summer solstice has been calculated. The shadow will be shortest at the summer solstice and longest in the winter. In summer the shadow will be 10m long, and in winter 75m long at midday. There is no doubt that the two properties and parking spaces within the closest proximity to this tree will be in significant partial to full shade all year round. If the .dwg files were accessible, then a shade plan could be drawn but unfortunately these are not available.

Furthermore, this calculation, though simplistic does not account for the mass of all the trees to the south of these properties, many with a similar height, which will mean much of the communal area behind these properties will be under constant shade all year round.

Image 4: Yellow area in middle of image shows amount of construction within the root protection area of T221 and adjacent trees, as well as proximity to buildings post development - extracted from the Tree Protection Plan.

Image 5: Group of trees including T221, which will cast much shade on properties proposed to be developed less than 10m to the north of them.

Such a large tree will also undoubtedly be under pressure to be removed when the new elderly occupier sees the tree swaying in strong winds. The other trees will also drop large volumes of leaves onto these 5 properties causing slip hazards as well as blocking gutters and drains (Image 4 & Image 5).

T213 (category A), a purple leafed Beech is also being built under. The radius of the canopy of this tree is 5m (10m diameter). It is 15m tall. This tree can easily grow to 20m and have a 16m diameter canopy. The building is to be constructed at 4m from the stem of the tree. There are no elevation drawings submitted but the Design and Access statement shows similar buildings, which though low level, have an estimated elevation of 3m at eaves to 5m at apex. This would suggest that the tree canopy will be touching the roof unless pruned away. This tree has many years of growing left to do. Aside from constructing the property within the Root Protection Area the tree will constantly require pruning to keep the canopy off the building. Again, both this tree and T214 (category A), a 16m tall Red oak with a 14m canopy spread will block much light into the rear of this property all year round (Image 6).

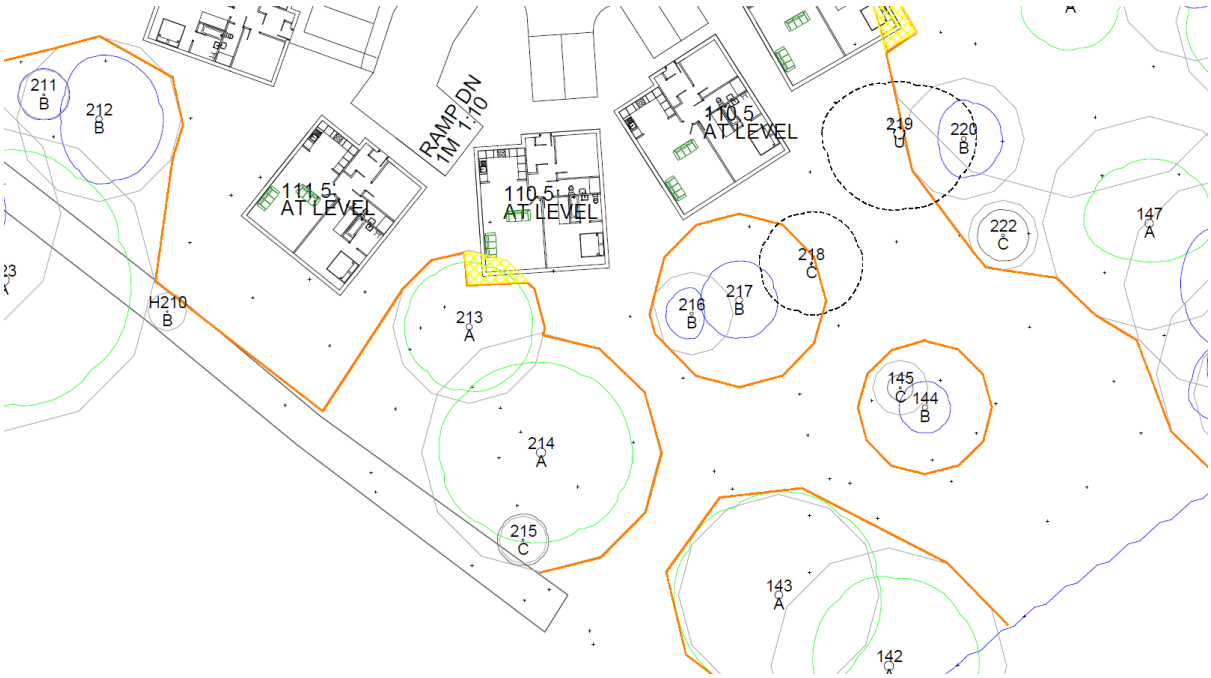

Image 6: T213 & T214 in close proximity to the proposed building. The canopy of T213 will be on the roof and will require annual tree work, or a significant crown reduction on this side - extracted from the applicant's Tree Protection Plan.

T267, T268, T275 and T276 are all category B (desirable for retention) mature ash trees up to 22m tall with canopy spreads up to 17m. They are all scheduled for removal to allow for a road and 3 properties to be built (Image 7).

T282, T283, T284 (all category B and mature Sycamore 18m tall, with a joint canopy spread of 32m E-W and 14m N-S) are again being built under. T282 is less than 10m from the rear of the property, which is proposed to be constructed within 14.77% of the root protection area. These are immensely big and long-lived trees, which will block much light and annually produce a massive amount of leaf fall to the rear of the 2 properties in this corner. Under T282 and 283 16m of vertical wall will be constructed within the RPA of which at least 9m will be under the canopy. The current

canopy clearance above ground level is 2m, which means the trees will have to be significantly crown lifted to grant clearance to the building.

Image 7: T267, T268, T275, T276. All mature category B mature ash trees to be removed for the scheme. Also, T282, T283, T284, T285 (to be removed) and T287 (to be removed) are shown along the north eastern boundary - extracted from the Tree Protection Plan.

T285 is a grade B, mature ash tree. It is an 18m tall multi stemmed trees with a canopy spread of 16m. It is scheduled for removal as the proposed property below it cannot be constructed without its removal, as too is T287, an ash tree of similar proportions but which is in poorer physiological condition.

Image 8: Red outline shows extent of mature trees to be removed which are depicted in Image 5

Image 9: Red outline shows extent of mature trees to be removed which are depicted in Image 5.

The Sustainability Statement says on p.6 "Wherever possible, the dwellings have been orientated to ensure the principle rooms face south/south west, with larger south/southwest facing windows and bifold doors where appropriate to maximize the solar gain during the winter months. A canopy is proposed over the large area of feature glazing, to prevent any chance of overheating during the summer months."

No statement has been made considering the other factors relating to large trees adjacent to the properties such as shading, seasonal nuisance, and influence of roots. Shading has been discussed earlier in this report. Many of the properties' principal rooms with large windows will be in shade all year round. To appreciate this the Tree Protection Plan must be evaluated, as the Site Plan Drg. No. 3703-101 does not show the locations of many of the trees surveyed, including some very large and significant trees.

The proximity of the trees to many of the properties will mean they will likely come under pressure for removal from home insurance companies, particularly as the soil type for the area does include a quantity of clay, so the effects of shrinkage and plasticity may become a factor. Many of the mature trees to be retained are also Ash, which are notorious for shedding small twigs in heavy winds, which will cause concern to residents and put further pressure on the trees to have works done to them in the future.

Large sections of the new roads and a car park are proposed to be constructed with a cellular confinement system due to the proximity of the construction to tree roots. The road will have to be

constructed to be capable of withstanding ground pressure from heavy vehicles like dustbin lorries and deliveries. A detailed construction specification will be required to ensure no damage due to severance and compaction can occur to these trees roots both during and after construction.

Finally, there is no comment regarding the wider landscaping of the lower shrubs and vegetation. The woodland N (Preliminary Ecological Appraisal) will be virtually eradicated, with only 3 mature Sycamore trees, one wild cherry, one field maple and one hawthorn retained.

In my professional opinion the scheme is poorly designed in relation to the mature tree scape. No proper consideration has been given for significance of the mature trees in this site within the wider context of the village. The proposed development will see a huge loss of the mature tree scape, which is highly visible from the public footpath and adjacent roads. Where trees are to be retained, the best trees will be compromised by the layout of the properties, which are being built too close to the trees, frequently within the canopy and the root protection areas.

Those mature trees with noted features such as hollows, cracks and splits will certainly be summer bat roosts and provide a significant habitat for the bird assemblage, as well as having wider ecological significance. These should be retained, not removed.

Levels

The site has numerous level changes and consideration must be given to drainage. No plans have been submitted for drainage of surface water. Pluvial flooding and surface water flooding have been considered in the Flood Risk Assessment. Pluvial flooding relates to six properties, where potential design could mitigate. Surface water is considered likely to increase by 20%-40% by 2115, the projected lifespan of the new development. Mitigation through SUDS is recommended, which includes attenuation basins and ponds.

The pond is at the lowest point within the site. New roads, where there is currently grass, will mean that surface water run off will dramatically increase. For example, approximately 320m^2 of highway is to be created ESE of the pond, with a fall of 8m across 75m directly towards to pond. A further 600m^2 of hard surfacing to the NE of the pond will also catch water and run it towards the pond. This does not include water coming off the 12 properties along these highways. The surface water from this area in any rain event has the high potential of ending up in the pond. As the pond is a significant feature within the site, has records of Great Crested Newt, and could be enhanced to provide an improved breeding ground for GCN, it is imperative that any surface water from this new development does not end up in the pond, unless it is managed so no pollutants enter this watercourse. Surface water will have to be attenuated within the site or pumped up 6m+ to enter the main storm water system on the main road. This report considers the developers will seek to attenuate on site and thus the pond must be protected.

Sustainability

With respect to the natural environment the Sustainability Statement submitted draws attention to the National Planning Policy Framework (NPPF) environmental objective “to contribute to protecting and enhancing our natural, built and historic environment; including making effective use of land, helping to improve biodiversity, using natural resources prudently, minimising waste and pollution, and mitigating and adapting to climate change, including moving to a low carbon economy.”

Additionally, it highlights Rugby local authority's Local Plan 2011-2031 policy GP1 (ensure that positive planning is delivered expediently whilst ensuring that the three dimensions of sustainable development – economic, social and environmental, are achieved jointly through the delivery of sustainable development).

Rugby Borough Council recently declared a climate emergency and are focussed on carbon neutral agenda. It is an accepted science that mature woodland sequesters significant amounts of carbon dioxide. It is also accepted that local carbon sinks are far more effective than the pooling effect, i.e. mitigating for local carbon use by planting or protecting a forest on the other side of the world. Furthermore, a mature tree scape reduces local pollution, noise and wind turbulence. Aside from these tangible benefits there are also the proven medical benefits of having a mature green landscape on mental health and physical well-being.

A proportion of the site sits within a conservation area - a designated site of conservation importance. The land at Thurlaston Meadows Care Home, as the very name suggests, is significant within the village. It has a number of distinct habitats, with notable species and some very significant trees

It should therefore be a material consideration that the significant lost of mature trees, and the loss of greenspace will have a local impact on the residents of Thurlaston and an assessment should be made whether this proposed development, whilst perhaps directly benefitting the new owner occupiers, will have a greater detrimental impact on the village as a whole.

Conclusion

I strongly suggest this scheme is rejected in its current form due to the impact on the trees, woodland, itinerant wildlife and landscape.

This is not to say the site cannot be developed but a much-reduced scheme, more sympathetic to the formal parkland and woodland trees should be considered.

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About the author

In September 2000 Adam Owen graduated from University of Bangor, Wales, with a Master of Science degree in Environmental Forestry, passed with distinction.

In 2001, after graduating, Adam worked as a Tree and Countryside Officer for Guildford Borough Council and gained the qualification Arboricultural Association Technician's Certificate in Arboriculture with the highest pass rate of a credit. This is now classed as a Level 4 Certificate in Arboriculture. In due course he was promoted to Park and Countryside Manager and remained at Guildford Borough Council until 2012.

In this time Adam dealt with all manner of Arboriculture including: managing the Council's own trees stocks and budgets; Tree Preservation Order & Conservation Area tree works; trees and development; liaising with Councillors and Committees; and representing the Council at hearings with the Inspectorate of Planning and as an expert witness in the Magistrates Court. Adam also

formulated and produced tree management policies; tree and woodland management plans; and supplementary design guidance for Guildford Borough Council.

Adam then moved to Hampshire County Council as a Business Manager for 5 Country Parks. He revised the tree management process for the Countryside Service and contract managed tree inspections.

In March 2016 Adam left Hampshire County Council to work in private practice, setting-up two companies, iarbor and red earth property and landscape management, based in Plymouth, Devon.

In 2018 Adam also took on the role of Director for Moor Trees, a registered charity which runs two community tree nurseries growing over 25,000 trees a year, with volunteers, to creative native broadleaved woodland in Devon.

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