

Arboricultural Impact Assessment



**Tyler
Grange**

Bryn Lane, Wrexham

21st July 2021

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Contents:

Section 1: Introduction and Brief	1
Section 2: Baseline Information	2
Section 3: Arboricultural Impact Assessment	5

Appendices:

Appendix 1: Methodology, Constraints, Mapping and Limitations
Appendix 2: Arboricultural Planning Policy
Appendix 3: Cascade Chart for Tree Quality Assessment
Appendix 4: Tree Survey Schedule

Plans:

13907/P01: Tree Constraints Plan
13907/P02: Tree Retention and Removal Plan



Section 1: Introduction and Brief

- 1.1. This Arboricultural Impact Assessment (AIA) report has been prepared by Tyler Grange Group Ltd (TG) in relation to a proposed industrial development comprising two new units and associated hardstanding / access and landscaping at land east of Bryn Lane, Wrexham (hereinafter referred to as 'the site').
- 1.2. This AIA has been informed by pre-development tree survey work and an assessment of the proposed site layout in terms of tree retention and removal works required to facilitate the proposed development.
- 1.3. This report has been guided by the recommendations set out within the British Standard 5837:2012 'Trees in Relation to Design, Demolition and Construction – Recommendations' (hereafter BS5837). A full BS5837 tree quality survey of the site was undertaken in April 2021.
- 1.4. The report sets out the baseline findings of the tree survey and confirms the removal of localised areas of low value tree stock to accommodate the proposed development with the proposals allowing for the retention of the site's Moderate value tree cover (Category B specimens). No Tree Preservation Orders are present on site. The scheme allows for the retention of areas of open green space which will be planted with new scattered trees and shrubs to mitigate for the proposed localised areas of low value vegetation removal.



Section 2: Baseline Information

Site Description

- 2.1. The site comprises an area of previously developed land boundary by belts of trees. The internal portions of the site has undergone some recent clearance and ground levelling works.
- 2.2. Existing vegetation has been largely left to naturalise and comprises a mix of screening scrub, younger bushy trees and mature belts of roadside tree cover to the east (G3 – G9), north (G10, G11) and west (G1, G12) with more limited pockets of naturalised and self-seeded vegetation present to the south (G2). Some areas of internal emergent regenerative scrub and younger lower value self-seeded trees are remaining following the evident clearance works (G13, G14). A linear roadside species-poor hedgerow is also present to the western site boundary, along Bryn Lane (H1). All trees are influenced to some degree by the existing developed context, whether this be the surrounding highways network or ground levelling works and disturbed earth present to the site-side rooting environments.

Tree Survey Summary

- 2.3. The survey was completed in accordance with BS5837, and the methodology as detailed at **Appendix 1** to the rear of this report. In accordance with the above recommendations, the tree survey included all trees within / in influence of the site and the site boundaries that were over 75mm diameter at breast height (dbh).
- 2.4. Measured topographical survey data was used to inform the locations and surrounding context of the sites individual and groups of trees. Any trees not included within the topographical survey have been approximated using measurements taken during the tree survey and further informed by aerial photography.
- 2.5. A total of 14no. tree groups (G1 – G14) and a single hedgerow (H1) were identified during the tree survey of the site. The survey findings are illustrated on the **Tree Constraints Plan** ('TCP' 13907/P01) located at the rear of this report. The TCP shows the distribution of the trees surveyed together with details of their constraints to new development in accordance with BS5837, including:
 - Tree Quality Gradings;¹
 - Root Protection Areas (RPA's);²
 - Tree canopy spreads;³
 - Tree Shading.⁴

¹ The value of arboricultural features surveyed in accordance with the methodology set-out in Appendix 3.

² A layout design tool indicating the minimum area around a tree deemed to contain sufficient roots and rooting volume to maintain the tree's viability, and where the protection of the roots and soil structure is treated as a priority. See further explanation at Appendix 3.

³ Dimensions of the trees crown spread and clearance from ground level. See further explanation at Appendix 3.

⁴ Shade cast by existing trees which may affect the availability of sunlight and daylight within a new development. See further explanation at Appendix 3.



- 2.6. Findings for each of the tree groups surveyed are detailed in the Tree Survey Schedule (see **Appendix 4**). This provides a tabulated record of the trees surveyed, including reference numbers, species composition, tree dimensions, life stage, physiological and structural condition, and the arboricultural value of each survey entry.

Tree Grading Summary

- 2.7. The trees surveyed have been categorised using the 'cascade chart for tree quality assessment' (see **Appendix 3**) recommended by the BS5837. Grading subcategories (1, 2 and 3) are intended to reflect the arboricultural, landscape and cultural values, respectively. The grading system allows informed decisions to be made concerning the design and impact of potential development in relation to the arboricultural value of the trees surveyed.
- 2.8. Surveyed trees are a mix of Low Value (Category C) to Moderate Value / Quality (Category B) trees. No High Value (Category A) specimens were included within the survey, owing largely to the site's naturalised degradation and lack of active management.
- 2.9. Category B trees signify those that provide moderate arboricultural quality and value to the site and have been considered as important to retain within the scheme where possible in design. Category B trees are denoted by a 'Blue' tree canopy outline as illustrated on the **TCP**. This level of classification has often been assigned to trees which attract a higher collective rating than they might as individuals, particularly in terms of their visual appearance where contributing to a cohesive group of trees.
- 2.10. Category C trees are trees represent trees of low arboricultural quality and value. Category C trees are denoted by a Grey tree canopy outline as illustrated on the **TCP**.

Planning Policy

- 2.11. The site falls within the administrative remit of Wrexham Borough Council. A summary of the local planning policy context relating to arboricultural matters is provided at **Appendix 2** to the rear of this report.
- 2.12. In summary, local policy objectives seek the retention of tree of merit (Policy EC4), noting that *'Development which results in the loss or significant damage to valuable trees, important hedgerows or ancient woodland sites will not be permitted'*.
- 2.13. Emerging local policy is concerned also with the protection and diversification of green infrastructure, and the safeguarding of tree with *"significant public amenity"*.

Tree Preservation Orders (TPOs)

- 2.14. Wrexham Borough Council have confirmed via email on 13th July 2021 that no Tree Preservation Orders (TPOs) are present on or within influence of the site.

Conservation Area

- 2.15. Wrexham Borough Council have confirmed via email on 13th July 2021 that the site does not lie within a Conservation Area.



Ancient Woodlands

- 2.16. As shown on the magic.gov.uk website, no trees within influence of the site are identified as Ancient Woodland.



Section 3: Arboricultural Impact Assessment

- 3.1. This Arboricultural Impact Assessment is informed by a composite of the tree survey findings and the proposed layout drawing. The Tree Retention and Removal Plan ('TRP' Ref. **13907/P02**) illustrates the extent of tree loss required to implement the proposed scheme.
- 3.2. The losses are summarised below at Table **3.1**:

Tree Reference	BS5837 Category	Description of Loss
H1 (4m section loss)	C	Partial loss of the western boundary roadside hedgerow to create the proposed pedestrian connection from the highway into the site.
G1 – partial (c. 250m2)	C	Removal of self-seeded and naturalised stands of site-side western boundary Category C tree cover to accommodate new hardstanding and car parking.
G5 – partial (1 specimen)	C	Removal of a single site-side specimen from G5 owing to proximity of Unit 2 development.
G8 – partial (c. 58m2)	C	Removal of three areas of G8 tree group along the site-side of the eastern boundary scrub and younger understorey stock owing to conflicts with the proposed parking arrangement east of Unit 2.
G10 – partial (c. 1,207m2)	C	Removal of stands of younger scrub and naturalised trees across the northern site boundary in order to accommodate the proposed site access, turning area and car parking spaces to the north of Unit 1.

Table 3.1 – Tree Losses

- 3.3. The extent to which the proposed scale of tree loss is deemed acceptable should be a judgement based not just in relation to quantum, but also the quality, condition and contribution of the tree stock. The losses relate to the clearance of low value trees of generally limited maturity which can be readily replaced in the short term with a combination of new individual tree planting, shrubs and belts of younger whips.
- 3.4. The proposed layout safeguards the moderate value tree stock, ensuring that no Category B specimens need to be removed in order to accommodate the proposed development footprint. None of the tree on-site are covered by a TPO and the function of the site's boundary tree cover can be maintained as a result of the losses occurring along the site-side of groups, retaining a degree of screening and habitat connectivity to the edges of the proposed development.

Proposed Canopy Works

- 3.5. There are no direct canopy conflicts with the new buildings but the **TRRP** illustrates where proposed crown lifting works will be required where the new pedestrian connection is to be located beneath the canopies of trees retained trees. This is necessary in order to maintain a clear and unobstructed pedestrian connection along the north western site boundary tree cover onto Bryn Lane. Crowns will need to be lifted (or maintained at minimum stated heights where trees are already lifted) to a clearance above finished floor levels as stated below, to the following trees:



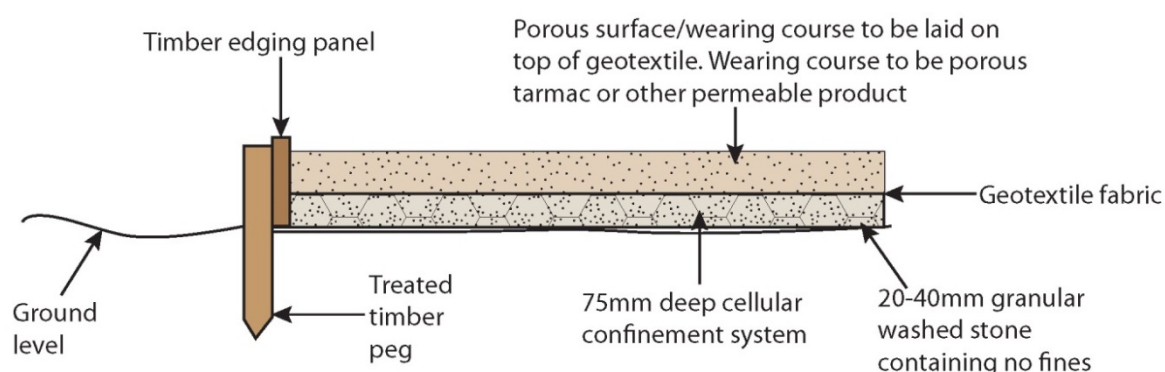
- G11 – lifting works to a single specimen as shown to the southern lower crown which will be lifted to (or maintained at) a 3m canopy clearance from lower branch tips to finished floor levels over the new car parking area.
- G12 – lifting works to two specimens as shown to the eastern lower crowns which will be lifted to (or maintained at) a 2.5m canopy clearance from lower branch tips to finished floor levels to maintain an unobstructed route for the new western boundary pedestrian connection.

3.6. It is advised that remedial pruning of any poorly attached branches or hanging deadwood is also undertaken if required in relation to any trees that are to be retained within the public realm or within influence of the proposed pedestrian connections.

No-dig construction footway

3.7. Whilst a section of H1 will be removed to accommodate the new western boundary pedestrian connection onto Bryn Lane, the retained trees within G12 will need to be safeguarded from ground compaction and reduced permeability by implementing a no-dig construction technique where the new pedestrian connection will traverse the retained RPAs.

3.8. The pathway will be created through the use of a porous, granular wearing course and sub-base system, retained by timber edging (see cross-section below).



3.9. A no-dig solution using a 75mm Cellweb Tree Root Protection system will require that only leaf litter and debris need to be removed from the surface as the Cellweb system does not require excavation into the soil, therefore avoiding damage to tree roots. Construction will need to be undertaken by hand and with care not to damage the adjacent canopies or to disrupt the ground condition within the surrounding RPA.

3.10. A separation fabric, using the Treetex T-300 Geotextile (Geosynthetics Ltd), will be laid directly onto the ground as a separation and filtration layer. Treetex T-300 also acts as a pollution control layer to protect the soils beneath. Angular 40/20mm stone will then be laid as a sub-base to allow for variable levels and soil conditions within the site. The 75mm Cellweb Tree Root Protection system will then be laid, (strictly as per the manufacturer's specification) and filled with the same stone as infill to provide a load-bearing and permeable structure suitable for pedestrian movements.



Construction Stage Mitigation

- 3.11. Central to the mitigation of effects during construction and operation will be the production and implementation of an Arboricultural Method Statement (AMS), detailing how the above and below ground structures of retained trees and hedgerows will be protected during the site preparation and construction phases of the development in accordance with BS5837. It is therefore recommended that a full AMS is prepared as part of a reserved matters application for the site or to discharge applicable and suitably worded pre-commencement planning Conditions.
- 3.12. An AMS will set out a practical and robust strategy for the protection of retained trees for the site preparation, construction of the proposed new link road and the wider development. An AMS can be agreed in writing with the LPA as part of subsequent reserved matters application and / or through imposition and discharge of suitable planning conditions, and is recommended to include:
- a schedule and specification of the required tree canopy works;
 - specifications for barriers and ground protection;
 - procedures for any specialist construction techniques and any supervised excavations within RPAs;
 - phasing of work;
 - an auditable system of site monitoring; and
 - a Tree Protection Plan.

Conclusions

- 3.13. The development will safeguard existing moderate value trees (Category B specimens) and no mature trees nor will any TPO specimens be removed to facilitate the development. Losses are limited to the clearance of on-site Low (Category C) value vegetation with limited wider public amenity impacts as a result of the retention of site boundary vegetation.
- 3.14. The layout has been informed by the BS5837 baseline survey data to offer the best solution in terms of tree retention balancing the quality of the trees being removed and retained, against the scheme viability and required development footprint and access arrangement.
- 3.15. Given the limited quantum and quality of the trees proposed for removal and the scope to provide new planting within the site, the development proposals are considered acceptable in arboricultural terms and demonstrates conformity with local planning policy aspirations pertinent to trees and green infrastructure.



Appendix 1: Methodology, Constraints, Mapping and Limitations

Field Work

- A1.1. In accordance BS5837, the tree survey included all trees within / in influence of the site and the site boundaries that were over 75mm diameter at breast height (1.5m).
- A1.2. Measured topographical survey data (supplied by others) was used to inform tree locations their surrounding context. Any trees not identified on the topographical survey are prefixed with (*) and their locations have been approximated using measurements during the tree survey and further informed by aerial photography where required.
- A1.3. The trees surveyed were visually inspected from ground level only. No invasive investigations or climbing inspections were necessary to confirm visual or audible signs of defect or debility and no tissue or soil samples were undertaken. For further clarification please refer to the tree survey explanatory notes in below.

Tree Numbers

'T' prefixes have been used to identify individual trees and commence with 'T1'.

'G' prefixes have been used to identify groups of trees.

'H' prefixes have been used to identify hedgerows.

'W' prefixes have been used to identify woodlands.

Species

- A1.4. Species are listed by their common name, both in the schedule and in the report text.

Height and Stem Diameter

- A1.5. The stem diameter is measured at 1.5m above ground level and given in millimetres (mm). Tree heights are measured in metres (m) using a clinometer where access and land topography allowed. In instances where access to tree's stem and height measurements were not possible, the dimensions have been estimated by eye.

Crown Spread and Height of Crown Clearance

- A1.6. Radial crown spread is measured in metres and is listed for each of the four cardinal points where access has been possible to obtain a measurement. Where access was not possible to measure the spread of the canopy, such distances have been estimated by eye or informed by aerial photography.
- A1.7. The measured canopy shapes have been plotted on the **Tree Constraints Plan (TCP)** at the four cardinal points. For groups of trees, the extent of the canopy has been measured as an average across the group and plotted using the topographical survey mapping. In some instances, Tyler



Grange will use aerial photography to inform the canopy spread of larger tree groups and woodlands where topographical data is limited for such features.

- A1.8. The distance between the ground level and the first significant branch or radial tree crown, whichever is the lower, has been measured in metres.

Age Class

- A1.9. The age of each tree is defined as follows:

Young - within the first third of reaching full maturity;

Semi-Mature - within the second third of reaching full maturity;

Early-Mature - within the last third of reaching full maturity;

Mature - specimen at full maturity; and

Veteran – tree that, by recognised criteria, shows features of biological, cultural or aesthetic value that are characteristic of, but not exclusive to, individuals surviving beyond the typical age range for the species concerned.

Physiological and Structural Condition

- A1.10. The physiological or structural condition of each tree is defined as either; good, fair, poor or dead. For each tree, where appropriate, notes on the structural integrity are provided on form, taper, forking habit, storm damage, decay, fungi, pests, etc.

- A1.11. An assessment of a tree's physiological condition is defined as:

Good – fully functioning biological system showing expectant vitality for the species i.e. normal bud growth, leaf size, crown density and wound closure.

Fair – fully functioning biological system showing below average vitality i.e. reduced bud growth, smaller leaf size, lower crown density and reduced wound closure.

Poor – a biological system with limited functionality showing clear physiological decline, disease or significantly below average vitality i.e. limited bud growth, small and chlorotic leaves, low crown density and limited wound closure.

Dead – tree observed to fully dead with no living parts.

- A1.12. An assessment of a tree's structural condition is defined as:

Good – no significant structural defects.

Fair – structural defects which could be alleviated through remedial tree surgery or arboricultural management practices.

Poor – structural defects which cannot be alleviated through tree surgery or arboricultural management practices.



Tree Quality Gradings

- A1.13. The value of trees have been assessed in accordance with the BS5837 Cascade Chart for Tree Quality Assessment (See **Appendix 3**). Grading subcategories (1, 2 and 3) reflect arboricultural, landscape and cultural values respectively.

Root Protection Areas

- A1.14. The **Tree Constraints Plan** shows the approximate extent of Root Protection Areas (RPAs). The RPAs have been plotted and calculated in accordance with the methodology set out in Appendices C and D of BS5837, using the tree stem diameter dimensions obtained during the site visit.
- A1.15. Plotted RPAs serve as a layout design tool indicating the minimum area around a tree deemed to contain sufficient roots and rooting volume to maintain the tree's viability, and where the protection of the roots and soil structure is treated as a priority.
- A1.16. Where pre-existing site conditions or other factors indicate that rooting may occur asymmetrically, a polygon of equivalent area should be produced. Modifications to the shape of the RPA should reflect a soundly based arboricultural assessment of likely root distribution observed on-site. Any deviation in the RPA from the original circular plot should take account of the following factors whilst still providing adequate protection for the root system:
- a) the morphology and disposition of the roots, when influenced by past or existing site conditions (e.g. the presence of roads, structures and underground apparatus);
 - b) topography and drainage;
 - c) the soil type and structure; and
 - d) the likely tolerance of the tree to root disturbance or damage, based on factors such as species, age, condition and past management.
- A1.17. The plotted RPAs have therefore informed the design of the proposed development where possible. While developing within RPAs should be avoided, special working methods can be adopted to alleviate the RPA disturbance for cases where the development is considered necessary and unavoidable.

Tree Canopies and Shading

- A1.18. The distribution of tree canopy cover on and within influence of the site is illustrated on the **TCP**. Canopies have been plotted at cardinal points for individual and groups of trees. The Tree Survey Schedule included at **Appendix 4** to the rear of this report lists the vertical clearance from site ground level to significant tree branching of individual trees. This measurement informs the impacts of accessibility and development beneath tree canopies.
- A1.19. The principal tree shadow constraints are shown on the **TCP** and have been plotted in accordance with BS5837 using the current height of surveyed trees. The indicative shade cast by existing surveyed trees signifies the area within which the amenity interests of shading, available daylight and the proximity of trees to any future site uses may be impacted upon should a tree be retained as part of development.



A1.20. Where shading is unavoidable, the potential adverse impact of shadowing should also be reviewed on balance with the positive aspects of retaining a degree of canopy shade. BS5837:2012 (para. 5.3.4, a) NOTE 1) states that "shading can be desirable to reduce glare or excessive solar heating, or to provide comfort during hot weather. The combination of shading, wind speed/turbulence reduction and evapotranspiration effects of trees can be utilised in conjunction with the design of buildings and spaces to provide local microclimatic benefits".

Limitations

A1.21. The comments made are based on observable factors present at the time of inspection. Although the health and stability of trees in their current context is an integral part of their suitability for retention, it must be understood that this report is not a tree risk assessment and should not be construed as such. While every attempt has been made to provide a realistic and accurate assessment of the trees' condition at the time of inspection, it may have not been appropriate, or possible, to view all parts or all sides of every tree to fulfil the assessment criteria of a risk assessment.

A1.22. No tree can be considered entirely safe, given the possibility that exceptionally strong winds could damage or uproot even a mechanically 'perfect' specimen. It is therefore usually accepted that hazards are only recognisable from distinct defects or from other failure-prone characteristics of the tree or the site. An assessment of the potential influence of trees upon existing buildings or other structures resulting from the effects of trees upon shrinkable load-bearing soils or the effects of incremental root or branch growth, are specifically excluded from this report.

Un-assessable Risks

A1.23. Any alteration to the application site or development proposals could change the current circumstances and may invalidate this report and any recommendations made.

A1.24. The Wildlife and Countryside Act (WCA) 1981 (as amended) makes it an offence to disturb nesting birds or recklessly endanger a bat or its roost. Bats are also a European protected species and are additionally protected under the Conservation (Habitats & c) Regulations 1994 and 2010 (as amended). The survey findings, constraints, opportunities and design or mitigation recommendations included within that report must be read alongside this document.

A1.25. A lack of recommended work does not imply that a tree does not pose an unacceptable level of risk and likewise, it should not be implied that a tree will present an acceptable level of risk following the completion of any recommended work.



Appendix 2: Arboricultural Planning Policy

- A2.1 Under the Town and Country Planning Act 1990 (as amended) the requirement to consider trees as part of development is a material planning consideration and will be taken into account in the determination of planning applications. Arboricultural planning policy that relates to the site is set out by policy at a National and Local level.

National Planning Policy

- A2.2 Planning Policy Wales, Edition 10, (PPW10, December 2018) is the land use planning policy for Wales and should be taken into account when preparing development plans. It is supplemented by a series of Technical Advice Notes (TANs).
- A2.3 PPW10 Paragraph 6.4.24 states that *"Trees, woodlands, copses and hedgerows are of great importance for biodiversity. They are important connecting habitats for resilient ecological networks and make a valuable wider contribution to landscape character, sense of place, air quality, recreation and local climate moderation. They also play a vital role in tackling climate change by locking up carbon, and can provide shade and shelter, a sustainable energy source and building materials. The particular role, siting and design requirements of urban trees in providing health and well-being benefits to communities, now and in the future should be promoted as part of plan making and decision taking"*.
- A2.4 PPW10 Paragraph 6.4.25 adds that *"Planning authorities should protect trees, hedgerows, groups of trees and areas of woodland where they have ecological value, contribute to the character or amenity of a particular locality, or perform a beneficial and identified green infrastructure function. Planning authorities should consider the importance of native woodland and valued trees, and should have regard, where appropriate, to local authority tree strategies or SPG. Permanent removal of woodland should only be permitted where it would achieve significant and clearly defined public benefits. Where woodland or trees are removed as part of a proposed scheme, developers will be expected to provide compensatory planting"*.
- A2.5 TAN 5 "Nature Conservation and Planning" (2009) addresses the role of the planning system in nature conservation stating at paragraph 1.6.1 that *"biodiversity conservation and enhancement is an integral part of planning for sustainable development"* noting that *"Development can also present significant opportunities to enhance wildlife habitats and the enjoyment and understanding of the natural heritage"*.
- A2.6 TAN 5 paragraph 3.3.2 states that local development plans should include policies that *"Protect ancient woodlands, veteran trees and other trees of nature conservation value"*, adding at Paragraph 4.6.2 that planning Conditions can *"enhance aspects of the natural heritage and its enjoyment"* by *"Requiring the protection and planting of trees"*.

Local Planning Policy

- A2.7 The site falls within the administrative borough of Wrexham. Wrexham County Borough Council (WCBC) planning policies are set out in the Unitary Development Plan (UDP) which was adopted in February 2005. It will be replaced by the Local Development Plan (LDP 2, 2013 – 2028), which is currently being prepared. A summary of WCBC's local planning policies relating to arboricultural matters is provided below.



Wrexham Unitary Development Plan, adopted February 2005

- A2.8 Policy PS2 states that *"Development must not materially detrimentally affect countryside, landscape/townscape character, open space, or the quality of the natural environment."*
- A2.9 Policy EC4 (Hedgerows, Trees and Woodland) states that: *"Development proposals should provide for the conservation and management of hedgerows, trees, orchards, woodland, wildlife and other natural landscape and water features, and include new planting in order to enhance the character of the landscape and townscape. Development which results in the loss or significant damage to valuable trees, important hedgerows or ancient woodland sites will not be permitted".*

Emerging Local Plan Policies: Wrexham Local Development Plan 2 (LDP2) 2013 to 2028 (Deposit Plan March 2018)

- A2.10 Wrexham County Borough Council is preparing the Local Development Plan (LDP) which will replace the current adopted UDP. The LDP will be a long-term land use and development strategy focused on achieving sustainable development and will guide development for housing, employment, retail and other uses, set out policies that will be used to decide planning applications and safeguard areas of land requiring protection or enhancement.
- A2.11 Policy SP13: Design Principles & Masterplanning Framework states that: *"All development will be required to be of a high quality, sustainable design which makes a positive contribution to the creation of locally distinctive places by ensuring compliance with the masterplanning framework and KSS schematics. Proposals must demonstrate how they have taken account of the local characteristics of surrounding areas and how innovative design solutions will enhance the quality of the built and natural environment".*
- A2.12 Policy SP15: Natural Environment states that *"Development will only be supported where it protects conserves and enhances the natural environment including Natural landscape features such as trees, hedges and woodland and the green networks between them which contribute to the quality and diversity of the natural environment and play an important role in mitigating the impact of climate change".*
- A2.13 Policy SP20: Green Infrastructure states that *"Wrexham's distinctive natural heritage provides a network of green and blue infrastructure. Protection, conservation and enhancement of natural heritage networks needs to be reconciled with the benefits of development".*
- A2.14 The policy adds that *"Development will be required to maintain or enhance the extent, quality and connectivity of the County Borough's multi-functional green infrastructure network, and, where appropriate:*
- i. *Create new interconnected areas of green infrastructure between the proposed site and the existing network,*
 - ii. *Fill gaps in the existing network to improve connectivity,*
 - iii. *Protect the features most valuable for both nature and people, and*
 - iv. *In instances where loss of green infrastructure is unavoidable, provide mitigation and compensation for the lost assets".*

A2.15 Policy NE3: Trees, Woodlands and Hedgerows states that *"Development will only be permitted where it does not cause unacceptable harm to trees, woodlands and hedgerows of significant*



public amenity, natural or cultural heritage value or those that provide important ecosystem services including mitigating the effects of climate change”, adding that “Development affecting all existing and new proposed woodlands should:

- Support proposals which assist in the respectful and appropriate use and protection of woodlands and boundary edges,*
- Promote sustainable management to deliver multiple benefits, and*
- Support the relevant aims and objectives of the Wrexham Tree & Woodland Strategy*
- 2016-2026 and all subsequent amendments.*

A2.16 The policy adds that *“Avoiding adverse or detrimental impact on trees, woodlands and hedgerows should be the primary objective of any proposal however, where adverse effects cannot justifiably be avoided and sustainable integration is not possible then adequate mitigation will be required. In such cases development should include proposals for the planting of new trees, woodlands, and hedgerows within the site, ensuring connectivity between proposed and existing green infrastructure”.*

Wrexham Tree and Woodland Strategy (2016 - 2026)

A2.17 The purpose of this strategy is to deliver the aims and objectives for trees and woodlands in the County Borough by:

- Providing a mechanism to improve the provision and care of trees in the County Borough;
- Ensuring that decisions and activities undertaken in relation to trees are made in a structured and consistent way; and
- Monitoring the action plan and policies for the care, management and enhancement of the County Borough’s tree population.

A2.18 The document sets out in detail the social, economic and environmental benefits of retaining and providing tree cover. The document promotes the use of larger trees and for increasing canopy coverage across the County Borough. The following objectives will ensure that the strategy’s overall aim is delivered:

Objective 1: Increase urban canopy cover relative to available planting space and aim to increase overall urban tree canopy cover to a minimum of 20% by 2026.

Objective 2: Ensure that the County Borough’s tree population is healthy, varied in age and diverse in species.

Objective 3: Sustainably manage, protect and enhance the County Borough’s tree population to maximise ecological, social and economic benefits.

Objective 4: Manage the risks to people, property and infrastructure from trees ensuring that they are as low as reasonably practicable, taking into account best practice, legal obligations and the costs of undertaking action in relation to the benefits that trees provide.



Objective 5: Appropriately manage and protect 'Trees of Special Interest' (ancient, veteran & notable trees) ensuring none within the control of the Council are lost due to preventable reasons.

Objective 6: Ensure sufficient data and resources are in place to enable the efficient and sustainable management of the County Borough's tree population.

Objective 7: Promote the value of trees and actively involve the community in the management, protection and enhancement of the County Borough's tree population.

Woodlands for Wales (2009)

A2.19 Woodland for Wales is the Welsh Government's fifty year strategy for woodlands and trees in Wales and includes the following policies, amongst many others:

- Trees and woodlands to be used to enhance the quality of the environmental and in doing so, making a positive contribution to biodiversity, landscape and heritage and the reduction of other environmental pressures.
- That woodlands and trees to be used more creatively in new developments and in the restoration of industrial sites to provide people with better quality, easily accessible green space.



Appendix 3: Cascade Chart for Tree Quality Assessment

TREES FOR REMOVAL				
Category and Definition	Criteria			Identification on Plan
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 (i.e. where, for whatever reason, the loss of companion shelter cannot be mitigated by pruning).			DARK RED
	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)			
TREES TO BE CONSIDERED FOR RETENTION				
Category and Definition	Criteria - Subcategories			Identification on Plan
	1. Mainly Arboricultural Values	2. Mainly Landscape Values	3. Mainly Cultural Values, including Conservation	
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)	LIGHT GREEN



TREES TO BE CONSIDERED FOR RETENTION

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 remedial 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 benefits.	MID BLUE
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 150mm	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 temporary/transient landscape benefit.	Trees with no material conservation or other cultural value.	GREY



Appendix 4: Tree Survey Schedule



Tree Number	Common Species Name	Height (m)	Trunk Diameter (mm)	Height of Crown Clearance (m)	Age Class	Physiological Condition	Structural Condition	BS5837 Category	Comments/Preliminary Management Recommendations	RPA Radius (m)
G1	Blackthorn, Goat Willow, Hawthorn	2 - 3m	50 - 75max.	0.00	Y	Fair - Good	Fair	C.2	Outgrown roadside south western boundary hedgerow trees. Mixed vegetation, self-seeded infill stock and unmanaged.	to 0.9m
G2	Goat Willow, Sorbus sp.	3 - 4m	Mixed - refer to TCP	0.00	Y	Fair	Fair	C.2	Self-seeded southern boundary trees. Multistemmed specimens, limited value.	Mixed - refer to TCP
G3	Hawthorn, Yew, Cherry, Ash	3 - 4m	to 150	1.8 - 2m	Y - EM	Fair	Fair	C.2	South eastern boundary self-seeded and naturalised bushy trees on fence line. Hardstanding to site-side edge.	1.8m
G4	Poplar (5no.), Ash (6no.)	18 - 20m	400 - 500	1.8 - 2m	EM - M	Fair - Good	Fair - Good	B.2	Off-site structure planting beyond eastern site boundary. Mature structural planting within wider industrial estate. Access restricted and plotted indicatively (not on topo).	to 6m
G5	2no. Oak	3m	175	1.00	Y - EM	Fair	Fair	C.2	2no oak trees, likely remnants from previous soft landscaping. RPA compromised by ground works to west of northern oak. Monitor for signs of stress and decline resulting from ground works.	2.1m
G6	Plane, Poplar, Ash, Cherry, Hawthorn, Birch	6 - 8m	to 400	0.00	Y - M	Fair - Good	Fair - Good	C.2	Mixed stand of eastern boundary naturalised trees. Scattered mature poplars interspersed with younger self-seeded infill vegetation. Viewed from site side as trees inaccessible.	4.8m
G7	Willow	14 - 16m	Mixed - refer to TCP	0.00	M - FM	Fair - Good	Fair - Good	B.2	Stand of mature multistemmed willow aligning eastern site boundary. G8 understorey of hawthorn and elder. Fallen specimen to north.	Mixed - refer to TCP

Tree Number	Common Species Name	Height (m)	Trunk Diameter (mm)	Height of Crown Clearance (m)	Age Class	Physiological Condition	Structural Condition	BS5837 Category	Comments/Preliminary Management Recommendations	RPA Radius (m)
G8	Hawthorn, Elder	2 - 4m	75	0.00	Y - EM	Fair - Good	Fair	C.2	Tract of young to early mature self-seeded and unmanaged trees aligning eastern boundary. Yet to fully establish as a notable landscape or arboricultural feature but future potential as screening.	0.9m
G9	2no. Birch	10 - 12m	Mixed - refer to TCP	0.00	M	Fair - Good	Fair	B.2	Stand of 2 mature birch on north eastern site boundary. Fair vigour, balanced crowns with some conflicts owing to stem proximity. Fallen willows to north east conflict with northern birch. Remove conflicting trees and re-balance crowns.	Mixed - refer to TCP
G10	Willow, Hawthorn, Elder, Blackthorn, Oak, Field Maple	2 - 4m	Mixed - refer to TCP	0.00	Y - EM	Fair - Good	Fair	C.2	Native screening belt across northern boundary left to naturalise. Punctured for site access to centre. Cleared across site-side edge. Retained stock is bushy, unmanaged and generally young.	Mixed - refer to TCP
G11	Grey Willow	12 - 14m	Mixed - refer to TCP	2.00	M - FM	Fair - Good	Fair	B.2	Northern boundary belt of mature willows. Some fallen and standing deadwood present and previous pruning work is evident. Functional management and roadside influence with tears and felled stock throughout.	Mixed - refer to TCP
G12	Ash	10 - 12m	Mixed - refer to TCP	1.50	EM - M	Fair - Good	Fair - Good	B.2	Linear stand of western boundary roadside ash trees. High canopy roadside screening with collective moderate value. Individually lower value specimens.	Mixed - refer to TCP
G13	Poplar	16 - 18m	Mixed - refer to TCP	0.00	Y - FM	Fair - Good	Fair	C.2 / B.1	Stand of poplar trees within G12 tree belt. No significant issues, trees are unmanaged and form high canopy features within the adjoining street scene.	Mixed - refer to TCP
G14	Poplar, Willow	4 - 6m	to 50	0.00	Y	Fair - Good	Fair	C.2	Young stand of self-seeded regenerative stock / pioneer growth following site clearance works. Young trees of limited value.	0.6m

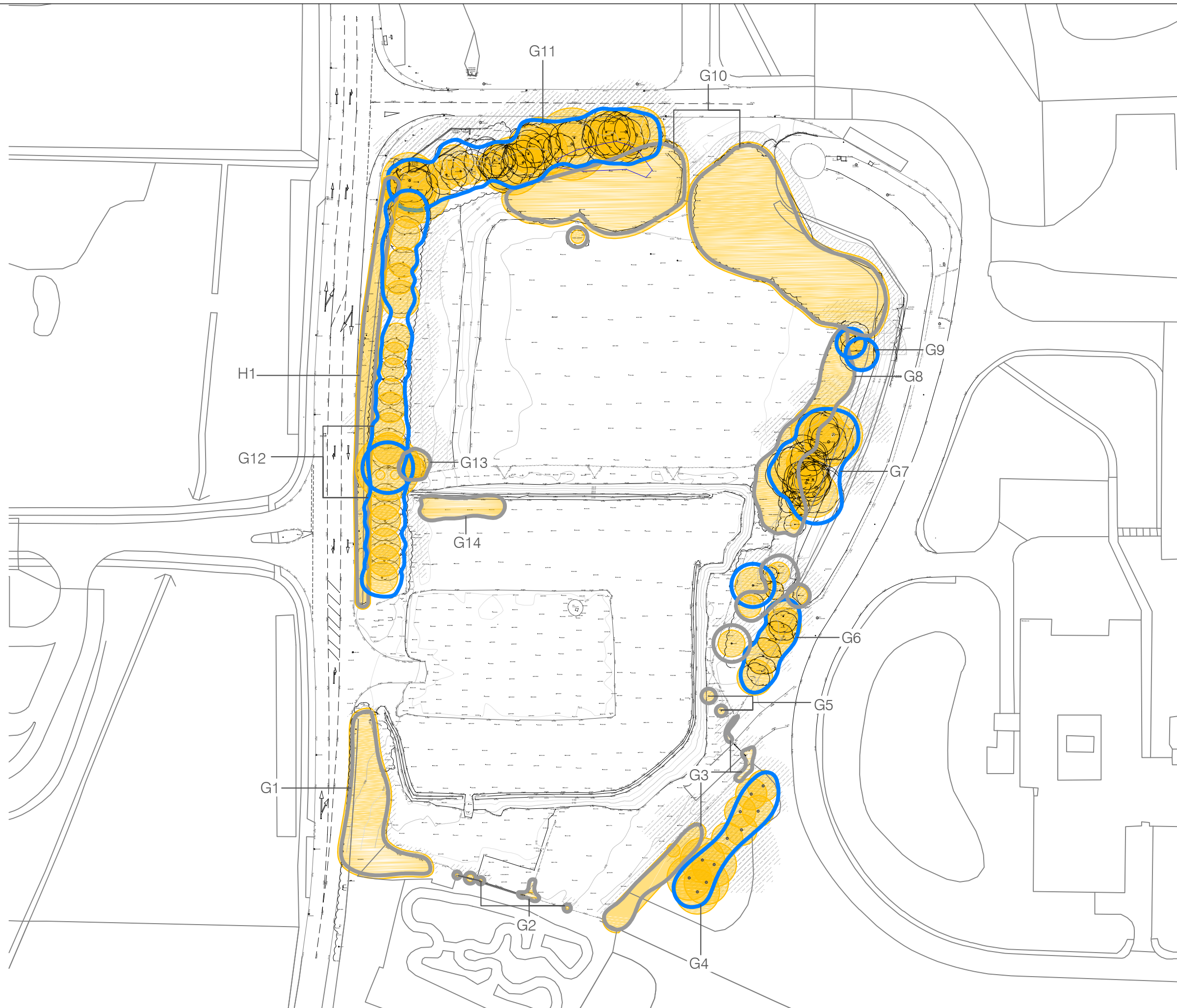
Tree Number	Common Species Name	Height (m)	Trunk Diameter (mm)	Height of Crown Clearance (m)	Age Class	Physiological Condition	Structural Condition	BS5837 Category	Comments/Preliminary Management Recommendations	RPA Radius (m)
H1	Hawthorn	2 - 4m	to 50	0.00	Y	Fair - Good	Fair - Good	C.2	Linear western boundary roadside hedgerow planting with tubes in situ. Double staggered planting arrangement with typical form for age and context.	0.6m

Plans:

13907/P01: Tree Constraints Plan

13907/P02: Tree Retention and Removal Plan





- Key
-  Category B - Trees of moderate quality and value
 -  Category C - Trees of low quality and value
 -  Approximate Extent of BS5837 Calculated Root Protection Areas (RPAs)
 -  BS5837 Canopy Shading Extents

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Tree Constraints Plan



0m 10m 20m 30m 40m 50m

1:1,000 @ A3

Project Bryn Lane, Wrexham

Drawing No 13907/P01

Date April 2021



- Key
-  Category B - Trees of moderate quality and value
 -  Category C - Trees of low quality and value
 -  Approximate Extent of BS5837 Calculated Root Protection Areas (RPAs)
 -  BS5837 Canopy Shading Extents
 -  Proposed tree removals
 -  Proposed crown lifting works

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Tree Retention and Removal Plan

0m 10m 20m 30m 40m 50m

1:1,000 @ A3



Project	Bryn Lane, Wrexham
Drawing No	13907/P02
Date	July 2021

The background is a dark blue-grey color. In the center is a large, irregular yellow shape. Surrounding this shape are various geometric elements: a light blue pentagon at the top left, a purple arrow pointing down at the top right, a purple asterisk on the left, a black hand icon with three lines above it at the top center, a black and white striped fan-like shape at the bottom right, and several other triangles and polygons in shades of blue, black, and white.

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